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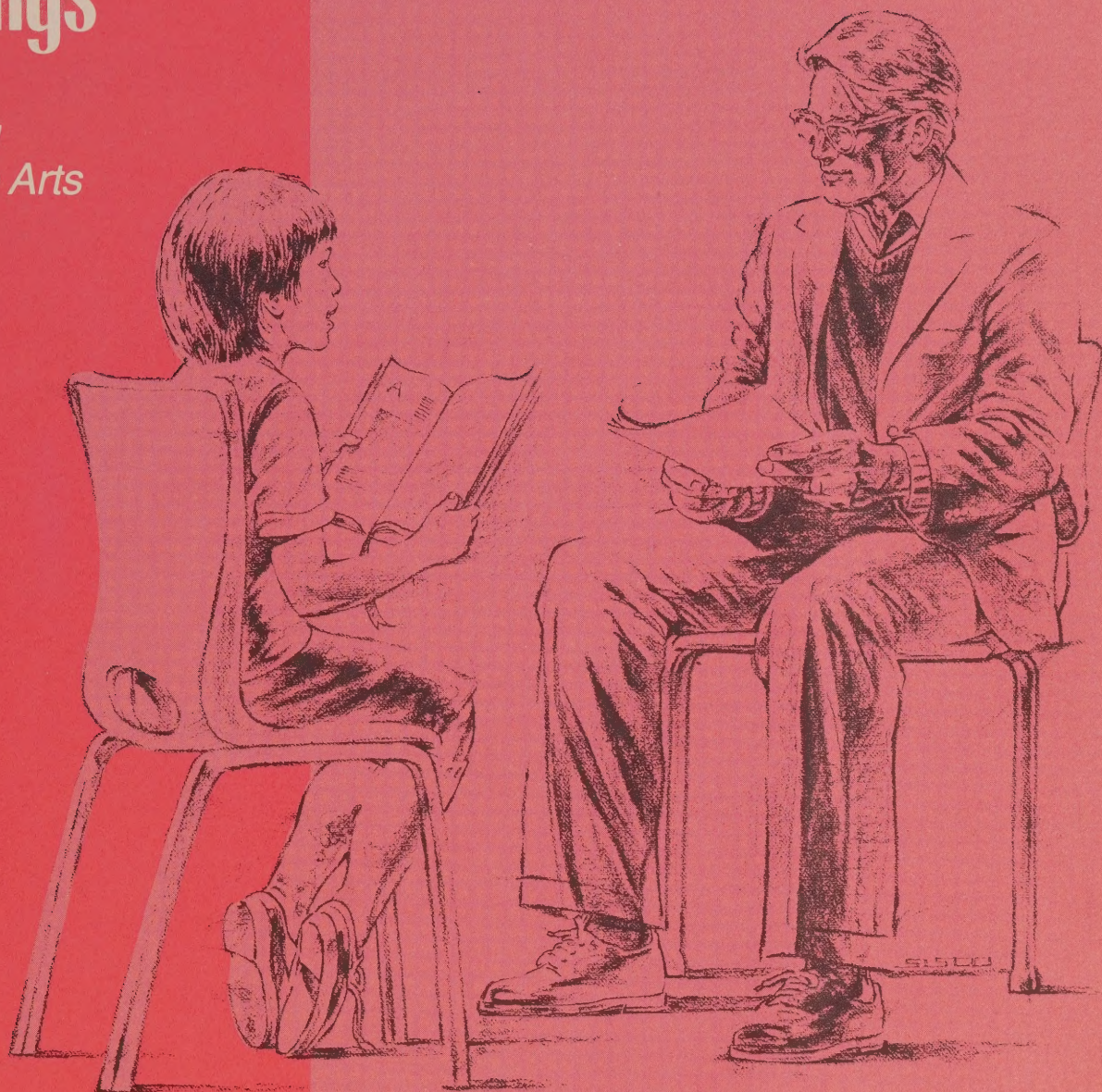
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Assessing
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Ministry
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Sean Conway, Minister
Robert L. Mitton, Deputy Minister

Junior Division Language Arts OAIP
Book III

READINGS
on
ASSESSING LANGUAGE ARTS

Ontario Assessment Instrument Pool

JUNIOR DIVISION LANGUAGE ARTS

Book   I: ASSESSING LANGUAGE ARTS

Book II: READING PASSAGES for
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BOOK III

Sources

Evaluation in Whole Language

by Norma I. Mickleson

Introduction

Whole language is a concept — an idea about how human beings become literate. It involves real people using language in personal and meaningful ways.

Language is a living process; it provides us with unique ways of being. No two people have the same repertoire of language and even though we may appear to be using similar language forms, the meaning we ascribe to them is, to a large extent, idiosyncratic and personal.

Because language is an integral part of everyone's life, it is not surprising that "language arts" occupies a place of preeminence in our educational system. Out wish to educate children, in fact, demands that we help them in their personal discovery of what language is and of how it can empower them as human beings. Whole language represents a significant and important change in the way we go about teaching "language arts" in our schools.

Even though we acknowledge that whole language is an approach we wish to use in our classrooms, certain constraints are automatically imposed upon us. We have to deal with situations where often we are working with 20 to 30 individuals in one place at any given time. Administrators need to be kept informed and "brought on side." Evaluation is required of us and parents must be made aware, not only of their children's progress, but also of the nature of the program we are using. Whatever approach we use, we are accountable not only for providing an environment in which our children can grow ·and develop, but also for recording and explaining the progress that is being made.

This book is about evaluation in a whole language program. But it is not about standardized tests, grade equivalent scores or norms, although these will be included in the discussions. Rather, this is a book that seeks to answer a simple question: "How can I demonstrate the extent to which children have received value from their active experience with whole language in my classroom?" The approach taken is predicated on the beliefs that education can be empowering, challenging and enjoyable, all at the same time; that evaluation is an integral part of the process, and that parents need to be actively involved, both in their children's language development, and in understanding and participating in the evaluation of their children's progress.

A common way of looking at evaluation is to suggest that it needs to be directly related to the goals or desired outcomes of a program. While this may be an important consideration, it is not complete in its application to whole language.

In a whole language program, where the focus in on emergent linguistic processes, an equally important consideration is to relate evaluation to the characteristics of whole language in the classroom. It is these characteristics which legitimize whole language and provide us with an appropriate focus for evaluation. Therefore, we will look both at the goals and at the characteristics of whole language in the classroom. We will also consider some underlying principles of whole language.

Whole Language

Goals or desired outcomes

Each school district and state or province will express the goals of its whole language program in a somewhat different way. In spite of this, however, there are generally three overriding considerations inherent in every statement of goals. It is generally expected that a whole language program will develop:

- growing demonstration of competence in communication

- a growing awareness, appreciation and love of literature

- an understanding of and ability to use language as empowerment

In stating goals for a whole language program, however, it is essential to recognize that the way in which progress towards those goals is operationalized is equally as important as the goals themselves. Hence, those attributes of whole language which are characteristics of its approach need to be examined.

Characteristics of a whole language program

Although whole language is described in many different ways, five fundamental characteristics will be noted here:

- the program is child centred

- language is owned by the children

- language in the classroom is meaningful and purposeful

- language is social

- the teacher is a participant, observer and a learner too

Underlying principles

Although as a precursor to looking at evaluation we have examined both the primary goals and the major characteristics of whole language in education, we are not yet finished with our preliminary considerations. Whole language is consistent with current research, and arising out of this research are several basic principles which underlie whole language and which should not be violated in any program of evaluation. Four major research-based principles of whole language are:

- The language arts (generally considered as listening, speaking, reading, writing and viewing) are interrelated. They are holistic in the sense that if they are broken down into bits and pieces, they no longer constitute whole language. Separating language into its constituent parts, in fact, violates the integrity of language as language. It is rather like breaking up a molecule of water (H O). If you separate it into its constituent parts, you no longer have water, you have hydrogen and oxygen! In other words, in a very real sense, the whole is greater than the sum of its parts.

- Literacy emerges. Competence develops as an ongoing refinement process while the children actively engage in language activities and interact with those around them in their attempts to understand their world.

- Learning is a constructive process. This includes listening, speaking, reading, writing and viewing. The old notions of "encoding" and "decoding" have been superseded by the recognition that all learning is generative, or constructive, in nature.

- Individual differences exist. Emergent language and responses to literature are not standard — they are based largely on personal experience. This is not to say that there are not commonly accepted forms of language in our everyday world or that hallmarks of growing maturity do not materialize as children become language users. But it is to say that children come to school with very different background experiences and that the basis of excellent teaching is accepting these differences and building on them rather than on denying them and trying to make them go away by forcing everyone into a standard pattern — which is exactly what basal materials try to do.

Evaluation

Is it necessary in a whole language program?

Let there be no mistake about it — evaluation is an integral and important part of whole language in education. It is not only desirable but it, in fact, essential if we hope to continue to apply what we know about language acquisition to educational practice. Parents, administrators, and individuals at various jurisdictional levels have the right to know how

their children are progressing and, to put it realistically, whether or not their money is being spent wisely. However, to be consistent with the basic philosophy of whole language, many of our current evaluation practices are going to have to change dramatically.

Evaluation defined

Simply put, evaluation in whole language is a multi-faceted process of ascertaining the extent to which individual children are receiving value from their involvement in our educational programs. Evaluation is multi-faceted — it has to be because of the very nature and complexity of the child or program it seeks to evaluate. No single approach, no individual test and no series of examinations external to the child (whether standardized or not) can do the job that needs to be done. In a whole language program, evaluation needs to be done individually and continuously and must be consistent with the already-stated goals, characteristics and underlying principles of whole language. It must be child centred and holistic.

Purposes of evaluation in whole language

The major purpose of evaluation in a whole language program is to inform educational decisions. What is it that the child needs to engage in or focus on in order to become a more competent language user than is already the case? How can we, the teachers or parents, structure opportunities in the environment to maximize the children's involvement in their own linguistic growth and development? How can we adjust our program in order to better facilitate the children's engagement in their own learning? These questions are important, for they provide the **raison d'être** for evaluation.

One of the most important aspects of the evaluative process is a determination of where the child is in so far as linguistic competence is concerned. Probably the best way to ascertain this is merely to observe the world in which he/she lives. It sounds almost too simple, but, in fact, one of the most significant evaluative techniques that we have in whole language is informed teacher observation and judgement. No one else is as close to the child on a continuous basis and no one more capable of observing language growth in a comprehensive way. The fact that the child's growth does not occur in response to externally-planned, linear or hierarchical experiences, but rather develops a refinement process from emergent "languaging" only serves to underscore the importance of the role of the teacher in evaluation.

What is evaluation in whole language like?

Probably the first point to be made in looking at the nature of evaluation in a whole language program is that it is non-competitive. It is not externally driven and, thus, is self referenced rather than norm referenced. Children are not compared to each other but are evaluated on their personal growth towards linguistic competence.

It will not be a simple matter for us to give up our traditional ideas about evaluation. We have invested too much time, energy and money in assessment practices to relinquish easily our customary beliefs in the legitimacy of such things as grades, test scores, letter grades

and absolute standards. We seem to believe, in fact, that what we do is legitimate simply because we do it!

Let us carefully and thoughtfully examine a few of these beliefs.

Grades: One, two, three, etc.

Grades are, in fact, administrative conveniences for grouping children in our schools into manageable units — in most cases, somewhere between 20 to 30 children to a "package" or grade. It is fallacious to think that somewhere out there, some absolute standard for completing a grade exists. The only requirements that apply in our educational systems are those which we have arbitrarily imposed. There is no absolute grade standard for any level which is inviolate and impervious to change. Belief in such grade-level standards is product oriented. Whole language is process oriented.

It would be ridiculous to suggest that we do not have to divide children into groups in order to manage the system — we do. But our quest for homogeneity within those groups is a misguided one. In fact, in many jurisdictions now, single "grades" are being replaced by family groupings in order that older, more mature children can help young, less mature ones and, of course, vice versa. Younger children learn from their more mature peers. The same type of change is occurring in whole language classroom. "Homogeneous" groups do not exist. Tests to establish the mythological homogeneity have disappeared. Instead, children are working together across all levels of competence — living with and learning from each other in meaningful, purposeful transactions. Competition has been replaced by cooperation and, in whole language classrooms everywhere, this has resulted in a climate of friendship and support.

Note: You will not find "languaging" in the dictionary. Its use in whole language has emerged because it describes a human process better than anything else does. It is an example of the fact that language is alive and that it grows and changes as needed in the transaction of meaning.

What about tests?

We have placed enormous faith in test scores, especially if the test has been "standardized." We seem to have forgotten such basic notions as the fact that standardized tests may not be well matched to the goals of our individual, local curricula or that determining an average, by definition, guarantees that half the students in the distribution will be below the mean. This, in the child's mind, aften gets translated into "I'm not as good a person as I should be."

Enough has been written about the abuses to which standardized test scores have been put to make their continued use questionable. Linda Hoopfer and Margaret Hunsberger summarize common concerns about standardized testing:

Few areas of education have not felt the influence and impact of standardized testing. In 1981 Strenio estimated that between 400 million ot 500 million standardized multiple-choice tests were administered annually in the United States alone. Results from these tests are used in accountability studies, teacher evaluation, student evaluation, student placement and programming, program evaluation, admittance to institutes of higher education, and even admittance to kindergarten. The standardized test is considered a highly objective tool for measuring individual and system performance.

However, despite its widespread use and respect, the test has been criticized by numerous authors. Among the most vehement have been Banesh Hoofman (1962), Paul Houts (1977) and Andrew Strenio (1981). Critics of standardized tests have cited lack of objectivity, test bias, over-dependence on reading, over-dependence on statistical power, lack of breadth and depth of content covered, penalties for deep thinkers, penalties for careless bookkeeping, ambiguity of text and questions, reification of test scores, control of the curriculum by test constructors, and lack of diagnostic value and information gain. Ethnomethodologists such as MacKay (1974), Roth (1974), Mehan and Wood (1975) and Heap (1980) have added other concerns: decontextualization of the test situation, imposition of adult reality on child perception, limits to the certainty of assessment, incomplete use of rules during the testing and the assumption that informational links are the same for all children. (p. 103)

There is no doubt about it — in a whole language program, where the goal in evaluation is to represent what children are able to do and not what they are not able to do, externally imposed examinations or tests are of questionable validity. Surely, what really matters is not what scores children get but whether or not they are growing in language ability.

In whole language programs, other strategies to assess progress are used.

Following, for example, is an illustration of the growth displayed by a six-year-old student in writing and spelling.

Michael, Age 6, September, 1980
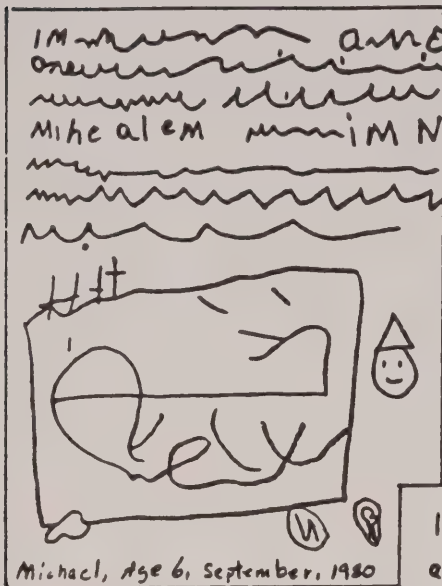
September 1980
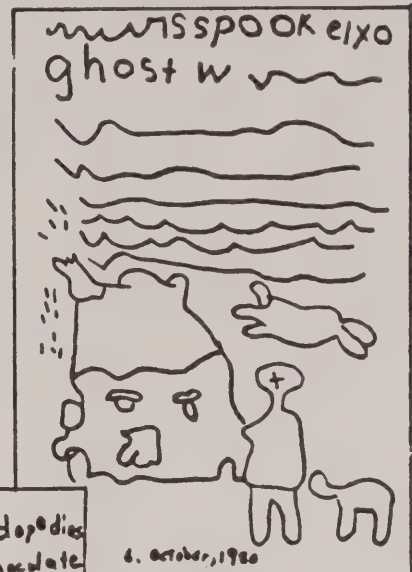
6. October, 1980

October 1980

I got two 'Cydopedies and I got one chocolate bunny. I got . 36 eggs. David was running on he hert his foot. are baby brother got the most eggs he had 79. an David got 46 eggs,

Michael, Age 6, march, 1981

March 1981

My Name is Michael M
Dear Santa Merry Christmas please would you take me. a well ochera and a lace

Michael, Age 6, December, 1980

December 1980

The big goast,
One day a big goast come. I got very skard I ran aroan but the goast cot upto me, every time I ran right in my house. My mom told me to go outside. But but what & their is a goast outside oh oh rily, a goast But thair is a goast outside you go outside you will see a goast. I wil but I wil not see a goad. So my mom went outside. I saw a goast but it wll go alway at night and it did. and never came back.

Michael Age 6, may 1981

May 1981

Courtesy Gail Heald Taylor

Correct Spellings (September 1980 to June 1981)				
Season				**Actual Words Spelled Correctly**
Fall	spook	ghost			Total: 2
Winter	my	is	Michael	dear	
	Santa	merry	Christmas	please	
	me	a	and	I	
	got	an	take	to	
	she	could	get	too	
	made	cake	with	Mom	
	we	had	the	ate	
	it	at	was	good	
	am	nice	like	play	
	games	eat	fruit	people	
	they	are	love	people	Total: 43
Spring	March	break	went	friends	
	boy	two	chocolate	bunny	
	eggs	David	running	he	
	his	foot	girls	baby	
	brother	most	leg	when	
	bike	broke	head	went	
	snail	named	then	time	
	house	ghosts	bats	once	
	lot	will	dinosaur	lizard	
	snake	help	ran	store	
	stay	kill	but	air	
	room	lived	happy	never	
	every	sick	going	then	
	hiding	corner	jumped	place	
	worm	door	hot	day	
	everyone	stay	crow	were	
	about	that	back	something	
	votes	leave	town	big	
	right	told	came	birthday	
	last	school	pass	toy	
	least	visits	reptile	salamander	Total: 84
					Total Words: 129

Courtesy Gail Heald Taylor

Michael's work illustrates dramatically how evaluation in a whole language program is child centred, or self referenced, rather than norm referenced. The evaluation focuses on what it is that the child is actually doing — its shows his personal growth and development over a period of time. Artificial standards are not imposed, language is not expected to be "controlled" according to predetermined grade-level expectancies and Michael is not compared with other individuals in his class through some kind of score or letter grade. The evaluation of Michael's growth is holistic because if focuses on real language — whole language — that is used to express meaning for Michael.

Michael's writing samples can be used diagnostically also. It is easy to seen where he needs help in becoming more competent in approximating commonly accepted forms of writing. Whether the coaching for Michael focuses on the semantic, graphophonemic or syntactic systems of language, is a matter of choice — what is it that will help him to grow at this particular time?

Grade-equivalent scores

One of the most ubiquitous and misused test score results in traditional language arts (reading) evaluation is the grade-equivalent score. It has no place in a whole language program, largely because it is neither holistic nor self referenced! Furthermore, it is **not** an indication of the level of instructional material that is appropriate for use in the classroom. As Roger Farr and Robert Carey note, "it exists as a descriptive number that relates an examinee's test performance to those in the norming population" (1986, p.154). If you are really interested in whole language, forget grade equivalent scores!

A, B, C's

Much has been written about letter grades. Unfortunately, despite their widespread use, like grade-equivalent scores, no one really is sure what they mean! That's because, more than most things in life, they mean different things to different people.

Certainly, however, letter grades are symbols which denote comparison with other individuals. An "A student", for example, is one whose performance on a test or a series of test is somewhere near the top of an overall distribution of scores. If the letter grades are assigned on the basis of the normal curve, this means that the student is in the top 5 percent of those included in the evaluation. But are we talking about a class, several classes, the school district or the province or state? In an attempt to clarify the meaning of letter grades, many jurisdictions have equated a percentage score with a letter grade. Thus, for example, a score of 80 percent or better might be allocated an A. The faith we have placed in numbers and in letter grades, however, is misguided and is not consistent with a whole language philosophy.

Validity and reliability

Both validity and reliability are legitimate concerns in whole language. Traditionally, when we talk about these issues in evaluation, we are concerned with tests. Do they measure what they are supposed to measure and do they do it consistently or reliably?

In whole language, however, both validity and reliability are considered from a somewhat different perspective. Tests, *per se*, do not play a critical role in a whole language program, nor should they! Evaluation is an integral part of the classroom dynamic. It is ongoing and is undertaken in a diagnostic and formative way in order to help the student grow. The data used in evaluation, however, come from the child, from his own language, and evaluation is centred therein. Validity, then has to do with context and relevance. Is the language the child's language? Does it occur in real situations — in real communication? If we are worried about whether or not our judgements are reliable, all we need to do is consult with other colleagues. Do they see what we do or not? Networking is powerful — and it is used by teachers working together in whole language. It can also be used in evaluation.

For too long we have vested our judgements in external sources — external to the classroom, to the teacher, and to the child. In a whole language program, however, we centre our judgements in the classroom on the child's language and we have faith in the ability of the teacher to demonstrate, through a variety of evaluative strategies, what is actually occurring.

Strategies for Evaluation in Whole Language

Children's growth

The most important reason we have for evaluating children's language is to help them grow in their ability to communicate. (Communication, of course, involves all of the language arts — listening, speaking, writing, reading and viewing.) In a whole language program, teacher observation is one of the most important approaches we have in evaluation. It is an integral part of classroom activities and is holistic and child centred.

Teacher observation

Teacher observation involves much more than the teacher simply looking and listening to what is happening in the classroom. While this is important, it is not sufficient. Comprehensive teacher observation involves collecting data which are observable and which can be used at a later time to assess whether or not progress is being made. Such recorded information is also indispensable in diagnosing areas of needed attention.

In a whole language program, student output is seen to be an indication of where the children are and of how they can be helped to refine their language performance. For the most part, we have to forego the comfort of the categorical "right" or "wrong" and instead, consider what it is that the student's language is telling us.

It is also important to remember that in a whole language program, the language arts (listening, speaking, reading, writing and viewing) are themselves not only inseparable but are also integrated across the curriculum. Thus, a social studies report, a science experiment or a response in mathematics can be used in evaluating children's growth in language.

Writing folders

One way to collect and record data from the children is to have a writing folder for each child. Standard-sized manila tag file folders are excellent for the purpose and can be stored in an ordinary box. (The children enjoy designing their own folders, and also decorating the storage box.) Individuals' names are clearly marked on the children's personal folders and the students themselves handle the entries.

It is useful to have a date stamp close to the folders. Before filing a writing sample, the student simply stamps the date on the page. (Even kindergarten and grade one students love to do this.)

For mature students, it is also helpful to have them label their entries: "first draft"; "revision"; "final copy."

The advantages to this type of recording are clear:

- At any time the teacher can work with the children on their personal files. Specific needs can be addressed as appropriate.

- Progress is clearly evidenced over time.

- The files are available as demonstrations of what the children are doing when administrators and parents want to assess progress.

- Colleagues can be consulted about appropriate directions to take in helping individual children.

- Other adults in the classroom (such as parent-helpers and student teachers) can interact with the children about their writing.

- Feedback to the children is: personal
  specific
  focussed
  relevant
  meaningful

- The child "owns" the folder and the language within it.

Don't be misled about the time that this takes. Once the system has been implemented, the children can operate it themselves without any difficulty at all. They simply stamp the date on their work and place it in the folder.

"Sharing-chairs"

In some classrooms a **sharing-chair** is placed close to the file box. Children who wish to share their stories, poems, reports or whatever, come to the sharing-chair before filing their material. It is wonderful to watch the response! A peer, the teacher or an adult present in the class goes to the child and becomes an active listener. Often, suggestions are made for improving or changing the material. Evaluation in this context is non-threatening, active, child centred and holistic, and children benefit enormously from it. It is also worth noting that once the class understands the system, disturbances rarely occur. Children can and do order their environment if the demonstrations are clear and if they are trusted to do so.

Audio tapes

In a whole language program, oral reading is a valuable activity, not only because it provides an opportunity for self expression and for sharing, but also because it enables the teacher to understand where the child is in interaction with textual or written materials.

One way to record the children's oral reading is through the use of audio tapes. The children have their own cassettes and they love to use the microphone or the tape recorder to read. They begin by simply stating the date and the selection they are reading. One hears such things as: "March 5. My own story," or "Novemeber 10. Everyone Knows What a Dragon Looks Like by Jay Williams; page 12."

Sometimes the teacher provides the reading selection and, at other times, the children choose what they will read.

Some of the important advantages to this type of data gathering are:

- The children can hear themselves read, and when they are working with the teacher, an aide or a parent helper, often become adept at evaluating their own progress.

- Growth and improvement are concretely demonstrated and the children are delighted as this occurs.

- There is a tangible record of progress available. This record can be used in discussions with parents and administrators.

- For many children, reading aloud to someone or to a group can be threatening. Using a tape recorder often appeals to these students because it is private and personal. In a very real and concrete way, the language activity is owned by the child.

- The teacher can consult with other colleagues about the progress of a student if it seems appropriate or necessary to do so. In this way, judgements made are subject to scrutiny and their reliability established.

- The children can manage the system themselves. Even the youngest students have demonstrated their ability to record on their own. This frees the teacher from having to be fully occupied listening to children read at a time when she might better be actively involved with monitoring all of the children's language activities.

- Audio tapes can also be used to record group discussions. In this situation, tape recorders with built-in microphones are usually less intrusive than those which require the use of microphones. As a matter of fact, class members soon become used to a tape recorder being present and ignore it.

Once again, information is recorded for future consideration. The teacher can listen to the replay alone or in the company of others. Contributions of individual children can be assessed. Furthermore, the dynamics of effective group participation can be noted and consideration given as to how the children can be coached in making their interactions with each other more effective.

Videotapes

Videotapes, like audiotapes, allow observations which can be evaluated at a later time. Furthermore, this can occur from several different perspectives:

- Individual children can be observed as they interact with materials, other children, adults, pets and/or books.

- Group dynamics can be monitored and plans made to coach the children in becoming more effective in interacting with others.

- Teachers can evaluate their own transactions with children in the classroom.

- Organizational strategies can be assessed in order to determine their effectiveness in promoting flexibility and responsiveness to language. Change can be implemented to improve opportunity for language involvement.

- Parents can view the tapes in order to observe what is happening and to actively participate in evaluating their children's experiences.

- Students themselves can observe and comment on their behaviours in interaction with others.

- Administrators can see what is going on and can be informed by teachers who are able to comment away from the demands of the actual classroom.

- Time samples can be taken and increased involvement, improvement and growing effectiveness evaluated.

- Colleagues can observe the tape and the teacher's personal reactions to any aspect of the situation reviewed, confirmed, or questioned. A different perspective or an observation by someone not personally involved often provides insight and paves the way for expanded understanding and improved practice.

Not all schools have their own video equipment. Most districts, however, now have video capability and teachers should explore the possibility of videotaping in their classrooms as a legitimate way of assessing "performance." If a technician is not available to do the taping, older children in the school can be given the opportunity. They love it, and after a brief period of training, manage to do an excellent job.

Photographs, slides and transparencies

We all enjoy seeing concrete demonstrations of our accomplishments. Children are no different. Pictures, slides and transparencies can serve as a useful evaluation tools. Children's writing, for example, can be transposed onto slides or transparencies and used in editing, either on a individual basis or in group discussions. This also provides a record for skill development. No, skills are not neglected in a whole language program. They are, however, considered to be refinements and they arise out of the language of the children.

In one kindergarten class, for example, one of the first activities undertaken by the students was to print their names ("write large") on paper provided by the teacher. Most of the children were able to do this with varying degrees of clarity. Some needed help. All the children's names were then put on a board and a slide made of the display. It was colourful, purposeful, and personally meaningful. At any time afterwards, the slide can be used to focus on graphophonemic principles. Whose name starts with "L"? Does any one else's? Who can find a vowel?, and so on.

The number of ideas that can be explored and developed from this one activity are virtually limitless. But, more importantly, for purposes of this discussion, the children's growing familiarity with language can be assessed and documented.

Books read and written

One of the basic goals of a whole language program is, inevitably, that the children will develop a love of literature and will become enthusiastic readers and writers. There is no way to assess this other than to have the children actively involved with reading, listening to and publishing books. Sharing experiences and acknowledging each other are critical to the process.

Sometimes we think it difficult to evaluate progress towards a goal such as the development of a love of literature or becoming an enthusiastic reader or writer. But this is because we

have traditionally been concerned with product rather than with process. We need to change our orientation.

The question is really a very simple one. Specifically — how can we judge the extent to which children are developing a love of literature and whether or not they are becoming enthusiastic readers and writers?

Before answering this, it is necessary to consider, for a moment, the issue of **motivation**. There has been a great deal of research done on this topic. What does it tell us? Simply put, we know that as human beings we do those things we like to do. We engage in activities which make us feel good about ourselves, which add to our feelings of worthwhileness and which give us a sense of competence and autonomy. We avoid doing those things which are anxiety producing, which cause us to feel dissonant or "out-of- step" and over which we have little or no control.

If we understand this, then, we know that the measure of a developing love of literature and of becoming enthusiastic readers and writers is in the nature and extent of the child's engagement in the process themselves. Does the child read? write? listen actively and attentively to stories, poems, reports and other forms of written language? Is the child willing and eager to share and to acknowledge others? Are the students maturing and expanding in their engagement with language?

A word of caution is in order here — we are not only talking about quantity, although certainly the extent to which a child reads, listens and writes is an indication of his developing love of literature. We are also concerned with quality, however; the quality of engagement.

What then, are some strategies that can be used to evaluate progress in this regard?

- Keep a record of what the child reads. This can be done in many ways — a book train for example, on which the students record their own reading. Each child will need a personal train, however, because a class one will become overloaded very quickly! It is not unusual for individuals to read 100 to 200 books a year in whole language programs.

- Publish the children's stories, reports and experiments. This can be done by individual authors or by preparing class anthologies of poetry, short articles, observations and riddles, for example. They are then available as indicators of growing proficiency in "languaging."

- Give the children choices of activities. Record those who actively participate in reading, in going to the library, in writing and in using the listening centre. These records can be filled out by the children themselves. Each day, all that is necessary is a "participation form" at each centre or for each type of activity.

- Observe and record the quality of engagement in listening to literary selections. Focussed listening and reaction to what is read (laughing, crying and caring, for example) are indications of engagement. They tell us something about a child's emergent interest in and understanding of literary forms. Teacher aides or parent helpers can be participant observers in recording these observations. The process can be reversed, too — the teacher can be the observer while someone else reads to the children. A record of books read, listened to and written can provide the raw material for evaluation. Children are developing a love of literature if they are engaged, focused, and producing their own stories, poems and books. How much richer a source of data these materials are than any test score!

Conferencing

One of the most valuable sources of information in evaluating pupil achievement and progress is the personal conference. Direct interaction of the teacher with the child provides an opportunity for a personal, focused "examination" of what is going on.

Each conference will be unique, addressing as it does the particular needs of individual children. Sometimes general concerns might be raised. At other times, a conference will be held to address a specific issue such as editing a piece of writing, hearing a child read, or commenting upon a particular submission. Journals can be shared during a conference, or research reports discussed.

Conferences do not always have to be held with individual students. Sometimes it is appropriate to assess the progress of a small group project or to discuss a plan of action with a number of individuals. "Putting a paper to bed" is an example of this type of conference, as is planning a research project.

One of the main concerns of teachers is finding time to hold conferences. In order to facilitate conferencing, they should be
- brief
- focussed
- personal
- supportive

Conferences can be held during times when other students are actively engaged in activities such as writing, editing, reading, researching and sharing. They can be scheduled during break periods and immediately before or after school. It is important, however, that the tone of the conference be positive. It's purpose is to help the child improve in whatever area is being considered at the time. As long as children feel that they are supported in their endeavours, they will cooperate.

Interpretive probing

One of the basic principles of learning is that of starting where the child is and progressing from there. The only way that this can be done is to examine the student's output — their responses to and interactions with print, materials, and people. It is not enough, however, simply to observe before making judgements because impressions can be misleading. This is one of the greatest concerns with test items. They are judged to be categorically "right" or "wrong." Rarely, if ever, is any attempt made to find out what the thought processes are that lead a child to give a specific answer.

In one test, for example, the students were asked to circle the letter which the object pictured on the page began with (obviously, it was not a whole language program!).

s   f   p   r

Ty circled "s". It was marked wrong and he was obviously unhappy. Upon being asked why he had circled "s" he said, "Because salmon starts with s."

Experienced teachers know that normally children have reasons for what they do. They also know that the so-called errors that children make usually are based on some kind of rationale which makes sense to the individual. If the activities are isolated and contextually separated from meaningful discourse, of course, one guess can be as good as another as to the underlying thought processes involved.

In evaluating children's progress, interpretive probing can often change our perspective about categorically stating that a response is wrong. In a whole language program, so called "errors" are considered to be informational in letting us know what the child is thinking. However, in order to uncover this, interpretive probing is necessary. The child's answer to the question, "Why do you think so?" is often enlightening and can be interpreted not as "right" or "wrong" but as an approximation to a standard linguistic form.

Too often in education, assessment practices totally neglect interpretive probing, largely because they are administered and marked out of the context of the child's everyday experience. In whole language assessment, interpretive probing is immersed in the child's actual experience and is relevant to both evaluation and teaching.

Professional judgements

It would be absurd to suggest that in a whole language program the professional judgements of the teacher are suspect. The issue is usually couched in other terms, however — those of "objectivity" and "subjectivity."

In a whole language program, where the underlying model is one which recognizes not absolute, but multiple realities that are generated in real-life situations, there is no escaping the context of assessment. The teacher simply cannot be separated out from the classroom context, and therefore, must be part of the evaluation process. The teacher's subjectivity is a legitimate and enormously important part of the child's world, and therefore, of evaluation.

Professional judgement, however, needs to be supported by concrete demonstrations over time. Tests cannot do this adequately. Tests sample behaviours at given points in time and it is a spurious argument to plead the case for more tests.

Furthermore, responses to test items are either "right" or "wrong" and this determination is not relevant to whole language. In a whole language program, we are not looking for standard responses; we are seeking to understand the children's personal language in order to better know how to help them become effective language users.

Professional judgements, which are based on observation, permit an examination of patterns or trends. How consistent is the child in his willingness to write, read, or participate in sharing, is an important question.

It is important to remember that learning is not even. It does not occur symmetrically in spite of the usual learning curve one sees in psychology textbooks!

Figure A   Figure B

The curve depicted in Figure A represents a "best-fitting line" for a series of observations. Figure B is much more realistic, however. It shows periods of growth, of consolidation and of regression and this is closer to what happens. Furthermore, learning is not unitary — it is complex and multi-faceted. Anyone who has worked with children knows this. A child may need long periods of consolidation in one area such as reading but may be experiencing rapid growth in writing or in participating in discussions. Only the teacher can note these patterns and only the teacher can interpret the overall nature of the growth that is occurring.

What kind of strategies can be used to inform professional judgements? Some of the most useful ones are:

- checklists
- personal folders
- anecdotal comments

Checklists

Checklists can be useful in recording accomplishments. They can be handled in many ways. For example, there can be a checklist for each child — a personal record of achievement. The desired activity is listed and checked off as it is accomplished. The date is also noted.

Mary B	Sept 6	Oct 4	Oct 12	Nov 1	Nov 8	Dec 10
Choosing reading in free time						
Contributes to group discussions						
Volunteers to be a group leader						
Etc.						

At other times, a "skills" checklist might be used. The children's names are listed and the accomplishments noted.

	Recognition of Alphabet						
	A	B	C	D	E	F	etc
Mary A.							
John B.							
Sandra D.							
Larla M.							

It should be remembered, however, that if checklists are used, the items or activities being "checked" need to be worth evaluating. This is the teacher's decision: "What is it I need to know in order to better inform my activities? What information do I need to monitor and

adjust my own work?" If there is no sound educational reason for recording information, we need not bother. The judicious use of checklists, however, can provide an organizational structure for gathering information for evaluation purposes. Checklists can also indicate to us children who would benefit from additional help in specific areas.

Anecdotal comments

One of the most important activities we undertake in whole language is to record anecdotal comments on activities as we observe them. Because we are very busy people in our teaching, we need to make it easy for ourselves to record what is going on. There are several techniques which accomplish this objective. One way is to prepare desk "blotter-type" pages with the names of the children on them.

Mary	Bill	Susan	Fred
John		etc.	

A typical calendar appointment page will do. As we notice specific activities of significance, these can be jotted down as they occur. Later, the notations can be transferred to the children's personal files. An alternative method is to have a card file available with each child as an individual entry. As observations are noted, they are recorded.

It is important to have some kind of system organized to record information which will support the judgements we make. Our memories are often distorted because of the complexity and the multiplicity of the tasks in which we are involved.

It may seem, as we are talking about these ideas, that they are too time consuming to be practical. As a matter of actual fact, however, if we record only information which is important to us in making educational decisions as we work with our parents and students, the task is manageable. When evaluation is part of the process of teaching, it is incorporated into everything we do.

Computers

An increasing volume of computer software is becoming available for use in the language arts.

Students can work with computers independently and there are certain advantages insofar as evaluation is concerned:

- feedback is immediate, personal and focussed;

- word processors can be used to facilitate editing and revising;

- if a printer is available, the student's work can be recorded for future consideration;

- the children's books can be printed and placed in the library;

- progress in authorship can be assessed;

- children can interact with each other at the computer. Peers provide input as the children write, revise, edit and evaluate their own writing;

- the child's degree of involvement is easily observable;

- material is available to demonstrate growth to parents and administrators;

- planning teaching strategies is facilitated as common errors can be noted and addressed.

It is important to assess the degree to which computer programs and activities are consistent with a whole language philosophy. If exercises, quizzes and tests are not worth doing in the first place, they certainly are not worth doing via an electronic medium. On the other hand, computers can be used as an effective aid in evaluating children's progress.

Displays

Like everything else that occurs in the name of evaluation in whole language, displays of children's work can be useful in assessing growth. If the atmosphere in the classroom is supportive and encouraging and if displays of work are not competitive, children enjoy demonstrating their progress. In one whole language classroom, each child had a display frame in which to exhibit work. The choice as to what, when and if to use the frame was left up to the child. The frames were mounted on one of the chalkboards which had been covered with coloured construction paper.

Frames were simply 1/2 inch strips of coloured manila tag.
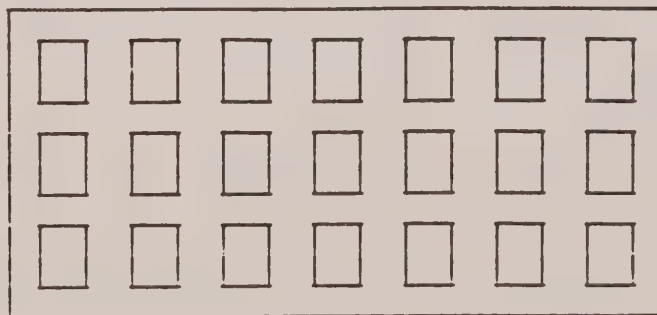
Samples of various kinds of writing, of stories, poems, pictures, reports, notes and letters appear. Again, a concrete record of achievement is available and can be used for diagnostic purposes, for discussion, for interaction, and for demonstrating growth.

Contracts

In whole language, increasing flexibility in "languaging" is desirable. Children need to be able to use their language in ways appropriate to specific, emerging situations. Contracts can delimit this process if they are not used judiciously.

On the other hand, however, contracts between children, teacher and child, or parent and child can involve real transactions – the uses of language to get things done.

A contract is simply an agreement between people. It can involve consensus on strategies to be followed in planned activities or on work to be completed. It can, and should be, re-negotiated if appropriate.

Contracts can be effective evaluation devices. They can help to set the frame of reference for various activities and can clarify expectations. They allow clear demonstrations of the child's growing responsibility and maturity in a way that no test can do. Furthermore, they provide materials and information for analysis at a later time. Educational decisions can then be made. The process is both relevant and meaningful, while, at the same time providing demonstrations of accountability.

Diagnosis

In a whole language program, diagnosis is based on "observation" in the broadest sense. According to *Webster's New World Dictionary*, "observe" can be defined as to "notice or perceive" or "to pay special attention to."

Observations, then, do not have to be visual only. They can be formed on the basis of auditory input as well. Interpretive probing can enlarge the scope of understanding.

In order to diagnose reliably, "observations" need to be recorded. This is not to say, of course, that *everything* has to be recorded. but evidence of growth is necessary and, for those who cannot be present to observe actively what is happening, substantiation is important. Much of what has already been discussed has focused on legitimate ways of recording observations in whole language.

The thoughtful analysis of each child's "languaging" is the basis of diagnosis. The focus is not so much on what is wrong, but on what the children's actions and output tell us about their thought processes. Our concern is, first of all, understanding what is happening and then, structuring an environment which allows us to focus on encouraging growth.

Every aspect of language can be used as a basis for diagnosis and subsequent planning. An examination of written language, for example, can serve as a guide to aspects of expression which need strengthening. Miscue analysis (Goodman & Burke, 1972) during oral reading can provide insight into the child's thought processes and demonstrate how capably the graphophonemic, syntactic and semantic cues in the material are utilized in reading.

Video and audio tapes allow for after-the-event consideration as to anecdotal comments, checklists and displays.

Diagnosis in whole language is child centred and pedagogically relevant. It does not result in classification or stratification of children into groups, but rather, leads to insights into how meaningful and holistic experiences can be provided for the children.

Working with Parents

Parents are partners in the education of their children. They need to be involved and to understand what whole language is and how their children are progressing.

First, the program

In order to understand what evaluation in whole language is all about, teachers need to inform parents about the philosophy, research base, and general approach to a whole language program. This can be done by inviting parents to an initial meeting where teachers and parents discuss together their mutual expectations. Most parents will need to be informed of why the classroom looks like it does, of why there is flexibility and activity, of how language emerges, of how children grow in competence, and of why literature is so important. They will need to know why workbooks, worksheets and basal readers are not being used and why children are not homogeneously grouped for instruction. They also will need to understand why numbers and grades are not used to assess achievement and they will need to be reassured that language growth and development are not described by test scores. They will need to understand terms like "holistic," "child centred," "relevant" and "meaningful" as they apply to language learners.

After an initial introductory meeting, parents can be kept informed about their children's progress by being invited to visit the class, to participate in helping, both at school and at home, and by being inundated with samples of their children's language activities.

It does not take long to get parents involved and when they see the results of the program, they become not only converts, but allies. Very quickly they can be given appropriate strategies for encouraging and helping their children in ways consistent with the school's philosophy of whole language. In one school, for example, a a "Ten Minute Club" was formed. Parents were asked to read with or to their children for ten minutes each night. They signed a dated slip to indicate that they had done so. After 25 entries, the children received a special, personal certificate. Different certificates were issued at 50 days, 75 days

and 100 days. Great enthusiasm developed and the children monitored the club themselves, insisting that their parents read with them for at least ten minutes every evening!

```
November
1.        _____
2.        _____
3.        _____
4.        _____
5.        _____
etc.
```

example of dated slip

Accountability

Parents want to know how their children are doing and they have every right to be informed. One of the most helpful ways of communicating with parents is through a face-to-face meeting. Many whole language teachers include the child in the parent-teacher interview. Why not? They are not trying to hide anything — they are attempting to work together to plan ways of enabling their children to grow. Parent-teacher-child conferences are extremely powerful in engaging all the players in the game!

Traditionally, parents want to know three things:

- How is my child doing?

- How is s/he doing compared to the other children?

- Will s/he pass?

The first of these concerns is easily addressed in a whole language program. Work samples, audiotapes, videotapes, "published" books, reports, records of books read, and writing folders all provide clear demonstrations of growth.

When parents see concrete evidence of their children's progress, they are far less inclined to be concerned about competition. An enthusiastic, committed child is reward enough! During parent- teacher-child conferences, in fact, it is not unusual for the children to become involved in assessing their own status.

The focus of the conference needs to be positive — this is what your child is doing; how can we work together to ensure expanded growth? Parents need to be reassured that it doesn't really matter how a score on a test compares with scores in such places as Stanford,

California or the metropolitan areas of the country. What really matters is how the child is developing in the situation in which he is "living.

"Passing" or "failing" are procedures that assume an absolute standard of performance for an administrative unit called a grade. It is an inappropriate concept and does not apply to whole language. There is no identifiable body of content which is sacrosanct to any "grade." The question, more appropriately, might be: "In what room, with which people, will the child do best?" There is no evidence to suggest that it is worthwhile to "fail" a child. In a whole language school, children do not "fail." They grow and develop together through experience and coaching. As long as we believe in absolute, identifiable units or standards of performance called "grades," we do not really understand whole language.

In spite of this, however, in many jurisdications, standardized tests will be mandated and whole language teachers have no choice but administer them. If this is the case, children should be coached on how to take the tests. As Prell and Prell (1986) point out, this is not unethical and it ensures that children have the tools which enable them to cope with their educational experiences.

In places where standardizes tests must be used, it is important for whole language teachers to regard the results from an appropriate perspective. Results are what they are — simply scores which provide information about a student's performance on a specific test. They, in no way negate an individual's progress, as monitored by the teacher, nor should they be used to group or classify students. Standardized tests are not relevant to the underlying philosophy of whole language even though they may be a fact of life for teachers. In the long term, whole language teachers need to demonstrate accountability in ways consistent with their underlying beliefs and educational practices and, in so doing, demonstrate to their colleagues the legitimacy of holistic, child-centred evaluation.

Guidelines for evaluation

In working with parents and in helping them to understand the basis of evaluation, it is useful to provide the guidelines which are being used. One example of such a set of guidelines, at the kindergarten level, follows:

Language Development

Guidelines for teacher observation include:

Experimenting with developing oral vocabulary and sentence structure
attempts to use new vocabulary and sentence structure in a variety of situations

Use of language for a variety of purposes
Uses of language
- self maintaining strategies
- directing strategies
- reporting on present and past experience
- towards logical reasoning
- predicting strategies
- projecting strategies
- imagining strategies

The development of listening skills
paraphrasing what has been said
listening behavior in a variety of situations
following directions independently and in a group
relevant comments and questions

Dialogue
response to teacher dialogue strategies
- orienting strategies
- enabling strategies
- follow-through strategies
- focusing strategies
- checking strategies
- informing strategies
- sustaining strategies
- concluding strategies

from *Evaluation in Kindergarten*, Armstrong Elementary School, Armstrong, B.C.

As the following poem illustrates, it makes no sense at all in a whole language program not
to work in close cooperation with parents:

Unity

I dreamed I stood in a studio
And watched two sculptors there
The clay they used was a young child's mind
And they fashioned it with care.
One was a teacher – the tools he used
Were books, music and art.
The other, a parent, worked with a guiding hand,
And a gentle, loving heart.
Day after day, the teacher worked with touch
That was deft and sure,
While the parent standing by his side
Polished and smoothed it o'er.
And when at last their task was done,
They were proud of what they had wrought,
For the things they had molded into the child
Could neither be sold nor bought.
And each agreed they would have failed
If each had worked alone,
For behind the teacher stood the school
And behind the parent, the home.

Author Unknown

Evaluating the Program

Evaluation in the whole language does not concern itself only with considering pupil progress but it also addresses the program itself.

Although the teacher can undertake this independently, it is often helpful to invite others to participate — colleagues or administrators, for example. Networking is powerful in this context, too.

The question to be answered is "To what extent are the goals and the characteristics of a whole language program being realized and implemented in my classroom or in our school?"

As with evaluation of the children's progress, the basis of providing a knowledge base is observation, recording, reflection, analysis, and action. Interpretive probing can also play an important part in program evaluation.

All of the strategies which have been described so far, can be applied to an evaluation of the program.

While it might not seem that we have time to do all this, information which is collected for one purpose (to evaluate children's progress) can be used in consideration of the program's effectiveness. It is important to remember that evaluation strategies which are not congruent with the underlying philosophy of the program are not acceptable. It is not appropriate, for example, to implement a whole language program and then to try to assess its effectiveness on the basis of a skills test. The two are not compatible — they reflect different underlying philosophical and pedagogical assumptions. In short, we cannot stand on both sides of a river at the same time. We have to commit ourselves to one or the other. Perhaps it is time we did so!

Self Evaluation

Young children are natural evaluators! They explore and manipulate their environment as they discover what it is they need to do in order to manage their lives. They learn both from their successful accomplishments, and from errors in judgement. Attempts at achievement are sources of information — approximations to success. Anyone who watches young children in action knows this.

When children come to school, however, errors cease to be sources of information and become, instead, classifications of worth. This is particularly true in the language arts. If you make an error, you are wrong. If you make enough of them, you are a problem. You may find yourself classified as "slow" or even worse, separated from your peers in a remedial class, a learning assistance program or a "transition" grade.

Whole language seeks to change this perspective. It acknowledges attempts at growth. Risking is encouraged and errors (or miscues) are seen to be simply expressions of language as they currently exist in the repertoire of the individual. Mistakes are signposts — guides to future action. To be able to say, "I made a mistake" or "It isn't working as well as I thought it should" is wonderfully freeing—and enabling. It allows perspective and provides an opening for improvement to occur.

In a whole language program, children are encouraged to evaluate their own activities — listening, speaking, reading, writing, viewing, being. They become increasingly sophisticated at doing so and, as has been evidenced in many classrooms, they correct their own errors. As their understanding about language expands, they become active participant observers in their own growth and development. They seek help openly from various sources — books, materials and people.

Teachers, too, evaluate themselves and their programs in whole language. When their students seem to be encountering difficulties, they look to the environment they have provided for learning. They do not seek an answer to a question such as "What is wrong with this child?" but rather "What can I do to better enable my students to be successful?" If an answer is not readily discernible, they consult with peers, colleagues, administrators, or with the children themselves who, believe it or not, often know what it is they need.

Just as children, however, need a safe environment in which to risk, so, too, do teachers. A supportive, knowledgeable administration is an enormous asset in the evaluation of the effectiveness of whole language. Where there is knowledge, respect and professionalism, self-evaluation can add immeasurably to the overall context of evaluation.

Post Script

We finish where we began — with the belief that language can be empowering for children and that evaluation is an integral part of a whole language program. It is not a separate activity — it is an inseparable part of the educational process. Its main purpose is to inform (in the broadest sense) educational practices and decisions.

Our beliefs about learning, teaching and evaluation must be congruent. Therefore, when we acknowledge that a whole language program is holistic and child centred, both our teaching and our processes of evaluation must reflect a holistic and child centred perspective. When our pedagogical strategies underscore a belief that developing competence in language is an emerging process, our evaluation must encompass this principle. Simply put, we cannot have it both ways. We cannot espouse and implement one philosophy of learning and teaching and evaluate from a totally different perspective. To do so brings into serious question the true meaning of our evaluation practices.

Evaluation in a whole language program is process, rather than product oriented. At the same time, as whole language teachers, we are accountable. As we observe, collect information, reflect upon, analyze and utilize it in our work with children and parents, we provide demonstrations of growth and development.

When we need to consult with others, we do so to ensure that our observations and conclusions are both valid and reliable. In doing this, we are not concerned with statistical constructs but with the more generic meanings of both "validity" and "reliability." According to *Webster's New World Dictionary,* "validity" means "well grounded on principles or evidence; effective; cogent," and "reliability" means "that which can be relied upon; dependable, trustworthy."

These are the characteristics which must define evaluation in whole language — like the program itself, evaluation must be well grounded on evidence which is both dependable and trustworthy. Some day, we will look back in disbelief at the faith we once placed in test scores and better grades. Our search for meaning in evaluation is taking us in a far different direction.

This book has outlined a philosophy of evaluation which is consistent with and relevant to whole language — it has also developed a number of strategies which teachers can use as they interact with children.

Evaluation in whole language helps us to get in touch with where the children really are in their growth and development. It enables us to enlarge our horizons and to provide the kinds

of experiences which will enhance the emergence of language competence. And, it facilitates cooperation and understanding among the most important people in a child's life — family, peers, and teachers.

> Science and philosophy do not advance, as people commonly suppose, by finding answers to problems as much as by discovering that the questions they are asking are inappropriate. (If you are asking the wrong questions, there is no way you are going to get the right answers.)

> Sydney Harris, "Strictly Personal"
> *Times-Colonist*, November 18, 1986

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Whole Language, A Closer Look

by Pamela J. Farris and Debra Kaczmarski

In the language arts field and across the elementary curriculum in general, increasing interest in whole language has arisen over the past few years. What is whole language? Definitions are vague and elusive; there is no simple explanation of whole language. According to Goodman (1986), "a whole language program is an educational program conducted by whole language teachers." Rich (1985) describes whole language as "an attitude of mind which provides a shape for the classroom" while Newman (1985) refers to whole language as

> a shorthand way of referring to a set of beliefs about curriculum, not just language arts curriculum, but about everything that goes on in classrooms. Whole language is not an instructional approach, it is a philosophical stance.

The framework of whole language tends to be quite abstract, dealing primarily with attitudes and beliefs.

The basic rationale for a whole language classroom involves the following. First, it is comprehension centered. All learning should make sense to the child. Second, all learning should begin where the child is in terms of language and experience. The development of learning is around the development of the child. Finally, the learning should be language based, related to thinking and experience (Anderson, 1984).

Learning Theory and Whole Language

People are born with a capacity and a need to communicate with others: thus, they develop language. People do not only repeat sentences or phrases they have heard, but they are able to express new ideas through sentences they create. Children's language development before they enter school seems ridiculously easy, but often becomes impossibly difficult in school. In fact, much of the school curriculum seems actually to hinder language development. Breaking language down into bits and pieces, making it dull and uninteresting with no discernible purpose, being irrelevant to the learner, and having it imposed on the learner by someone else make language complicated to learn. Real and natural language that is whole, sensible, interesting, relevant, and accessible to the learner makes language learning an exciting, motivating experience (Goodman, 1986).

Children, like adults, try to make sense of the world around them. This natural tendency makes school confusing to young children. It becomes nonsensical when schools fractionate language, stress exercises more than purposes, limit talking to only a small portion of the day, and provide no choices for children to find relevant activities which interest them.

Research suggests the need to provide open-ended classroom activities in which written language functions as it does in the real world. Rich (1985) is an advocate of having materials in a whole language program fit the needs of students rather than having students put through an ordeal of activities to accomplish someone else's identified objective, a problem of basal reader programs. Whole language activities, therefore, support students in all aspects of language. According to Newman (1985), students learn about reading and writing while listening, they learn about writing from reading, and gain insights about reading from writing. Smith (1982) asserts, "Teachers can demonstrate the utility of literacy by ensuring that children observe and participate in written language activities that have a purpose.

Basic to the whole language theory is the concept that children are intrinsically motivated to learn, to make sense of the world. According to Rich (1985), whole language teachers know that using language helps children make sense of the world and of language. For this reason whole language teachers arrange the environment so that students have opportunities for peer interaction. The whole language teacher serves as a guide who seeks student input and student interaction rather than dictate or direct outcomes.

Whole language teachers believe there is something special about human learning and language. Children are encouraged to use the creative language which comes naturally to them. High expectations are made of children's learning. Whole language teachers readily assist students to ensure that expectations are accomplished. As Goodman (1986) points out, all children are whole language learners, but there are no whole language classrooms without whole language teachers.

Implications for Teaching Communication Skills

The implications of the whole language classroom are clear. The classroom environment must be rich with all kinds of reading material and students must be encouraged to select from these materials. Reading, discussing, listening, and attempting to write their own interpretations entice children to learn. Whole, meaningful materials are the instructional fabrics of the classroom, not isolated words, sounds, or controlled vocabulary stories.

According to Goodman (1986), whole language teachers should move their desks to a corner of the classroom to support a shift away from a teacher dominated classroom, put materials on open shelves, get a collection of appropriate books in order to build a literate environment, and arrange students for interaction. Such changes in the classroom environment may prove to be difficult for teachers with thirty or more students in their classrooms and limited resources, but the results are worth the effort.

Peer interaction, along with student-teacher interaction, is essential to the whole language environment (Edelsky, Draper & Smith, 1983). Small group interaction, according to Long and Bulgarella (1985),

is desirable because it leads to clashes of points of view that encourage children's development of individuality, creativity, and ability to think. Also, every child has a desire to be competent. Clashes of ideas enhance this natural desire, as in group interaction.

Long and Bulgarella concluded from their study that the freedom to reject a peer's demands and the obligation to decide for oneself encourage critical thinking. Classroom discussions need to be lively and challenging.

Whole language is an attempt to get back to basics in a real sense—to set aside basals, workbooks, and tests, and to return to inviting children to learn to read and to write by reading and writing "real stuff" (Goodman, 1986). Reading, writing, mathematics, science, and social studies—the core of the elementary curriculum—need to be on the students' level and relevant if the children are to retain knowledge and apply it in other situations. Developing readers and writers need to be involved in writing events of their own and in reading a wide range of real, comprehensible books. Children must be in control of their reading development.

For beginning readers, predictable books are best to use inasmuch as good readers anticipate what will happen next in a story. Predictable books provide the young child with success in knowing where the book is going and what will occur next. Books such as *The Doorbell Rang, Goodnight, Moon,* and *Brown Bear, Brown Bear* are motivating materials to utilize in the classroom.

Graves (1983) has convincingly demonstrated that children who are writing in an environment where they are surrounded by literature instead of going through a basal reader and its accompanying workbook pages are learning to read at least as well as the other children. Yet, at the same time, such children are learning to write.

Writing does not grow from first mastering a number of skills within the writing process and then putting them together. Rather, children's writing development involves a gradual refinement of the entire process of writing on several fronts (Graves, 1983). In a whole language program, readers and writers develop control of the phonics rule through using written language sensibly. These self-developed rules are not artificial and overlearned as they would be in a structured reading and spelling program. Whole language programs and whole language teachers do not ignore phonics. The writing that takes place in most reading, spelling, and phonics programs is more often an imitation, a facsimile, a substitute. It is "writing" rather than writing (Edelsky & Smith, 1984). In the whole language program, spelling and phonics are kept in perspective of real reading and real writing.

Writing is social in Newman's (1985) view. A writer is dependent upon an audience of readers. The only way teachers can truly help children become fluent writers is by letting students write for many purposes, on topics of their own, and for audiences of their own. When students are able to choose their own topics, for example, the range of topics is exceedingly broad. Students learn different forms of writing by using them. Whole language

classrooms have mailboxes, and the children write to each other. They are also encouraged to write to relatives, authors, or to companies for information—giving students the chance to write with different purposes in mind. Children become effective writers when parents and teachers encourage them to choose the topics they write about, then leave them alone to exercise their own creativity (Bennett, 1986). Children need to decide what they, themselves, will write about, what they will say about it, and how much attention to pay to each aspect of it. This is authentic writing. The children are writing for a purpose; the decision is theirs on what to write. Thus, they are owners of their own work.

It is social interaction that causes children to want their writing to be clear to others. Coping with confusion in working with peers can be a better exercise in logical thinking than any teacher could have invented.

Like beginning readers, beginning writers are encouraged to take risks. When students write, they spell words as best they can, inventing if necessary, but using the words they need when they need them, rather than sticking with those words they are certain they can spell (Goodman 1986). Overemphasis on accurate spelling, punctuation, and neat handwriting can cause students to view the technical aspects of writing as more important than the meaning they are trying to convey (Newman, 1985). Teachers need to look beyond accuracy and neatness when examining students' writing, to become sensitive to the experimenting that is taking place each time children write. Teachers must understand that mistakes are actually windows of opportunity inasmuch as mistakes provide insights into children's thinking.

By providing demonstrations of writing in action and by being partners in the creating process, teachers do more to help children figure out how to be writers than all of the correcting of their mistakes can ever hope to do. Children do not need to be told how to write, they need to be shown. Whole language teachers write along with their students so that they understand *writer's block* as well as *dam overflowing writing* because, like their students, they are also writers. Teachers also need to support and cheer students on, not wipe out their first efforts and early enthusiasm.

Nearly every adult spells by memory, not by rules. When in doubt, the adult may write the word out several ways and select the one which looks correct. According to Trelease (1985) students learn meanings and spellings in the same way teachers learn the names of new students, by meeting them over and over again. Trelease believes that to help students improve vocabulary, spelling, and writing, they need to read, read, read.

The basic premise behind the teaching of reading, writing, spelling, and other subjects is that children and adults get better by doing it. Unia (Newman, 1985) suggests the use of journal writing to fill the objective of writing often. Students as early as kindergarten and first grade have shown the effectiveness of journal writing. Students write in their journals, typically, two or three times per week. The topic is up to them. The decisions the students make regarding the mechanics of their writing provide them with inventive solutions which in turn keep their ideas flowing onto the page. Edelsky and Smith (1984) found that, at

the start of the year, journals contained mostly inauthentic writing which is described as *goody-goody* content to please the teacher. By the middle of October students were observed using authentic writing. Authentic writing is initiated by the students themselves, often with their arms and bodies curved over their writing to ensure privacy. This is in contrast to inauthentic writing where students must be coaxed and prodded to write.

Unia (Newman, 1985) developed a coding system to ensure privacy in journal writing. Students put a red dot in the margin if they write something they do not want others to read and a green dot to indicate where the reader may begin reading again. Journal writing should be read by the teacher at least once a week and specifically commented on.

Since writing is social, it is not something one struggles to do alone. Newman (1985) has found it is more than helpful to have others assist with the massive amount of decision making involved in writing any piece. Conferencing, both the formal teacher-student conferences and the more informal peer conferences, is an important part of the whole language classroom. During the teacher-student conference, the writers develop the specific content of a piece, reflect on the writing process and strategies to use, as well as learning to judge their own efforts. Peer conferences enable children to share freely, ask questions, and lend support and praise for each other's writing (Calkins, 1983).

Initially, teachers may conference with students at their own desks since students may be more comfortable in their own territory. Later the conferences may be held at a round table, preferably with teachers and students being at the same height.

During the conference, good questions provide surprises for both students and teachers. Children may find themselves more knowledgeable about topics than they initially realized. Teachers ask questions that help students keep control of their own writing. Teachers should be disciplined to let the children do the work; they may ask questions that help the students find their own direction (Graves, 1983).

During conferences, teachers attempt to teach only one thing. Overteaching may confuse students, causing them to leave the conference more confused than when they entered. Graves (1983) stresses that skills taught in a conference last longer because they are being taught within the context of children's own writing.

Peer conferencing is important. Children gain valuable insight through collaboration. It is through talking out ideas and problems—by listening to their reactions and suggestions—by experiencing the effect of their own writing—by seeing how others are going about solving their writing problems, that children learn how writing is done (Newman, 1985).

Implementing Whole Language in the Classroom

Integrating the language arts throughout the curriculum enables students to develop the sense of purpose in content area classes (Ryan, 1986). Classrooms with integrated learning, according to Wagner (1985), need to be structured, with plenty of opportunities for long

periods of reading, writing, and carrying on task—or topic-oriented conversations. A good way to integrate the language arts is to focus on something else: For example, in a third grade classroom the study of dinosaurs, nutritious foods, or farming communities might be investigated as the teacher prepares different ways of understanding the topic through listening, speaking, reading, and writing activities.

Implementing the whole language approach necessitates evaluating what should be de-emphasized. Goodman (1986) believes the teacher should begin with reading, moving from basals, workbooks, and tests to authentic reading in a gradual manner. Graves (1983) believes writing should receive more emphasis initially with less time devoted to workbook, drill, and practice activities.

Questions most frequently raised about adopting the whole language approach include fiscal limitations, methods of evaluation, discipline, and reactions of other teachers and administrators. According to Hall, there are two clearly marked reasons for the doubts surrounding the implementing of whole language. First of all, "too many administrators want a clearly laid out program that can be followed exactly by all teachers and explained matter-of-factly for parents." Also "administrators may also believe that a carefully structured commercial program will be more likely to correspond with the content of standardized tests" (Hall, 1985, p. 8). Long and Buglarella (1985) also note the concern over achievement tests scores when they wrote, "Drill and practice may produce higher test scores." Educators must decide "whether our goals are to produce higher test scores, or to turn out individuals who can think critically, and creatively, and who have the intrinsic motivation to seek excellence."

In Cunningham's (1986) opinion, "Classrooms must be places where children learn concepts, and the language to talk, read, and write about them. We know that children will be motivated to become literate when they read and write about what is important to them."

These are key points when developing readers and writers: lots of reading and writing, risk-taking to try new functions of meaning. These three essentials must be present for the program to be a successful whole language setting (Goodman, 1986).

Security is needed for teachers, administrators, and parents who wish to change from a traditional classroom to a whole language classroom. "Teachers can teach that literacy is useful, enjoyable, and attainable, provided they are left free to teach in an unprogrammed manner" (Smith, 1981). However, much uneasiness arises when basal readers, grammar books, and teacher's manuals are left in the cupboard and the teachers must create a language arts program on their own.

Showing parents and/or school administrators the journal entries, for instance, is convincing evidence that real learning is taking place. Parents are able to see the skills of revising and editing are being taught through conventional language that is meant for publication. Observing small groups of children discuss a book that they are reading, and analyzing together, will make parents and administrators aware that lifelong learning skills are being nurtured and developed in a motivating environment.

Whole language advocates often resist measuring students gains by administering achievement tests rather than encouraging such evaluation. Despite the emphasis on lower level thinking skills, achievement tests do serve as measure of accountability which administrators and parents desire.

If children are to be active participants in a rapidly changing world, it is important for schools to explore avenues such as whole language which motivate children to think, discuss, read, and write. Until then, worksheets, basal reader, and English grammar exercises will continue to occupy the largest portion of the students' day.

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Miscues: Windows on the Reading Process

by Kenneth S. Goodman

Reading miscue research was undertaken for the express purpose of providing knowledge of the reading process and how it is used and acquired. In turn, this knowledge can form the basis for more effective reading instruction toward the achievement of the goal of universal literacy.

Some scholars see research as a quest for knowledge for the sake of knowledge. They see a sharp separation between research and the application of knowledge to the solution of real problems. This is a point of view which the authors of this work do not share.

We do not grudge the pure researcher his disinterest in the practical. In the course of our research we have frequently found uses for concepts that such pure research has produced. In interactions with linguists, psychologists, psycholinguists, and other academicians we have found it possible to raise issues and ask questions which stimulated them to conduct research and thereby provide further useful knowledge.

Now we are at a point in our research where we feel we know enough about how reading works that we can share with teachers and other practitioners some of our insights and their implications for reading instruction. Had our research not been reality oriented and rooted in our concern for the practical, this task of translating research into application might have been more difficult. Because we worked with real kids reading real books in real schools, the practical applications of the lessons we have learned and even the research procedures we used are more evident. Everything we know we have learned from kids. Our purpose here is to show our fellow teachers how they also may learn from kids.

Miscue analysis, which will be explained below in some detail, must be viewed as part of a pervasive re-ordering and restructuring of our understanding of reading. It is a tool which in research has contributed to the development of a comprehensive theory and model of reading; in the classroom or clinic it can be used to reveal the strengths and weaknesses of pupils and the extent to which they are efficient and effective readers. But it is only useful to the extent that the user comes to view reading as the psycholinguistic process it is. Miscue analysis involves its user in examining the observed behavior of oral readers as an interaction between language and thought, as a process of constructing meaning from a graphic display. The reader's use of graphic, phonological, syntactic, and semantic information is considered.

Fortunately, one of the most powerful uses of miscue analysis is in teacher education. In the process of analyzing the miscues of a reader, the teacher or potential teacher must ask questions and consider issues he may never have thought about. Was the meaning acceptable after the miscue? Did the reader correct the miscue if it was not? If a word was substituted for another word, was it the same part of speech? How close was it to the sound and shape

of the text word? Was the reader's dialect involved? Through these questions, instead of the teacher's counting errors, the quality of the miscues and their effect on meaning are the central concerns. Miscue analysis then is rooted in a psycholinguistic view of reading (one that sees thought and language interacting), but it is also a way of redirecting the focus of teachers so that they may see reading in this new perspective.

Several basic premises underlie the psycholinguistic view of reading. Reading is seen as language; in fact, it is one of the four language processes. In a literate society written language becomes a parallel to oral language. Just as *speaking* is productive oral language and *listening* is receptive aural language, so *writing* is the productive counterpart of speaking, while *reading* is the receptive process that corresponds to listening. The uses we make of oral and written language vary, but the purpose—communication—is the same. In reading, as in listening, the goal always is the comprehension of meaning.

Our research has been oriented to understanding how the reader gets meaning from language. It has helped us to see that the reader is a user of language; he is trying to get sense from what he reads. Reading instruction then must be concerned with helping the reader to become efficient and effective in this task.

Reading is a psycholinguistic process because it uses language, in written form, to get to the meaning. Psycholinguistics is the study of the interrelationships of thought and language.

When we try to understand how reading works, we must look beyond the superficial behavior of readers. We must try to see what is happening that is causing that behavior. When we teach reading we are trying to build the competence which underlies the superficial behavior; we are not trying simply to change the behavior.

A miscue, which we define as an actual observed response in oral reading which does not match the expected response, is like a window on the reading process. Nothing the reader does in reading is accidental. Both his expected responses and his miscues are produced as he attempts to process the print and get to meaning. If we can understand how his miscues relate to the expected responses we can also begin to understand how he is using the reading process.

Here is a sentence from one story used in our research, and the miscues one pupil produced in reading it:

But I remember the camera moving close to the crib and Mr. Barnaby bending over and saying soothing things to Andrew—but not too loudly

The reader omits a word and some word parts, inserts a word, substitutes other words, goes back at times to correct himself, and comes out with a meaningful sentence. We must be concerned with more than his superficial behavior. We must infer from it the process he has used and his competence with that process. He inserted "that" but corrected when he

realized the pattern he had created was not acceptable syntax. He omitted "and" but did not correct because it was not a necessary element.

We start in miscue analysis with observed behavior, but we do not stop there. We are able, through analysis of the miscues, to see the process at work.

Miscue Analysis

Miscue analysis as a research tool began in 1963. I started with the goal of describing the reading process. The most basic task in doing this seemed to be to have subjects read, orally, a story they had never seen before, one which was somewhat difficult for them.

Even in the very earliest research attempts two things became clear. First, it was obvious that oral reading is not the accurate rendition of the text that it had been assumed to be. Readers, even good ones, make errors. Second, it was clear that linguistic insights, scientific views of language, were very much appropriate to describing reading behavior. The things the readers did were linguistic things—they were not random.

When a beginning reader substitutes "a" for "the" in a sentence like:

A
The little monkey had it.

the reader is substituting one noun marker for another. When a more advanced reader sees:

There were glaring spotlights.

and says:

There was a glaring spotlight.

that reader is processing language, he is not just saying the names of words.

In these early studies I naively looked for easily identified cause-effect relationships. For each miscue I looked for some *one* cue. In this I was operating as others had done in research on error analysis. The difference was that I was using scientific linguistics to categorize the phenomena. So when I found myself saying a miscue had a graphic cause, I found myself aware that there also were grammatical relationships involved; "lad" and "lady" look quite a bit alike but they are also both nouns and they have related meanings. Both are kinds of people. So if a reader substitutes "lady" for "lad" which of these factors is the cause?

I was led then to the development of an analytic taxonomy which considers the relationships between the expected response (ER) and the observed response (OR) from all possible angles. Each miscue is considered on all variables that are pertinent, and no attempt is made to establish a single cause-effect relationship. Reaching this point in understanding

was dependent on coming to see that one had to look at the whole process and that the various kinds of information a reader used always interacted with each other.

This taxonomy was used then in studies of reader's miscues and modified continuously to deal with the phenomena we found in the actual reading of kids. The more we understood the more we were able to modify the miscue analysis so that in turn we could deal more completely with the miscues. A recent version of the taxonomy appeared in the *Reading Research Quarterly* (K. Goodman, 1969).

Miscues studies have now been completed on readers ranging rom near beginners to proficient high school students. Miscue research studies have included black and white readers, urban and suburban, non-native speakers of English, pupils labeled perceptually handicapped and many others. Studies have been done of miscues in languages other than English. Studies have involved subjects reading basal texts, science, social studies, mathematics, fiction, and nonfiction.

One series of studies followed a small group of readers over several years of reading development (Y. Goodman, 1971).

In examining miscues some variables have emerged as being more significant than others or more indicative of proficiency than others. It is possible then to get powerful insights into a child's reading or into the reading process in general using a less complete miscue analysis than the taxonomy.

In working with teachers we have used a variety of less formal versions of miscue analysis. The *Reading Miscue Inventory* is a published program for use of miscue analysis in classroom and clinical settings (Y. Goodman and C. Burke, 1972). It concentrates on nine key variables and the patterns of miscues pupils produce. Many teachers are also applying miscue analysis to the use of traditional informal reading inventories for selecting stories from their current instructional materials to use in miscue analysis.

In all miscue analyses, procedures are relatively uniform:

1. *An appropriate selection for the pupil is made.* This is a story or other reading selection which is somewhat difficult for the pupil. He reads the entire story, so it must not be longer than he can handle at a single sitting. It must be long enough to generate 25 or more miscues (50 or more in the case of research studies). More than one selection may need to be tried to find one that is appropriate. The selection should have the continuity of meaning that unified stories or articles provide.

2. *The material is prepared for taping.* The pupil reads directly from the book. The teacher or researcher needs to have a worksheet on which the story is retyped, preserving the lines of the story exactly as they are in the book. Each line on the worksheet is numbered with page and line of the story, so that miscues may be identified as to where they occur.

3. *The reader is audiotaped and the code sheet is marked.* The reader is asked to read the story. Before he begins, light conversation puts him at ease. He is told that he will not be graded for his reading and that he will be asked to retell the story after he has read.

He is also told that no help will be given while he is reading. He is encouraged to do the best he can to handle any problems. He can use any strategies he knows, he can guess or skip a word and go on.

As he reads, the teacher or researcher follows, marking the miscues on the typescript. Too much happens for everything to be noted as it occurs, so the entire reading, including retelling, is tape-recorded. Later the tape is replayed to complete the marking of the miscues on the worksheet. The worksheet becomes a permanent record of the session. It becomes the basis for the miscue analysis.

4. *The subject retells the story.* After he has read, the subject is asked to retell the story without interruption. Following the unaided retelling, the reader is asked open-ended questions to probe areas he omitted in his retelling. These questions do not use any specific information which the reader has not himself reported. The teacher or researcher does not steer the reader to conclusions. The reader's mispronunciations are retained in the questioning. A comprehension rating is based on an analysis of the retelling.

5. *The miscues are coded according to the analytic procedure used* ("Taxonomy," *Reading Miscue Inventory*, or other).

6. *The patterns of miscues are studied.* Because miscue analysis gets at the process and goes beyond the superficial, it produces information that can become the basis of specific instruction. If the reader shows insufficient concern for meaning, the teacher can devote attention to building this concern. If a specific problem occurs, such as confusion of *wh* and *th* words (with, that; when, then; where, there), strategy lessons can be designed to help the reader cope with the problem.

In noting such a problem the teacher can carefully find its limits. The reader does not interchange other words starting with *w* or *t*. He does not mix words like *whistle* and *thistle*. Only these function words are confused. In this way the teacher can design a lesson which will help the reader correct when he makes the miscue, and in the process such miscues will begin to disappear as the reader makes better predictions.

The ability to use the information gained from miscue analysis in working with learners is, as was said earlier, dependent on the teacher's moving to a view of reading and reading instruction consistent with views of reading as a meaning-getting, language process.

What We Know about Reading

Reading instruction in the last four decades has been word oriented. Basal readers have been built on this word centered view. Controlled vocabulary, a system of carefully introducing new words starting with those in very frequent use, has been the central organizing strand in reading instruction.

Phonics vs. whole word arguments are concerned with the best way to teach words. Miscue research has led us away from a word focus to a comprehension focus. As we have looked at reading from a psycholinguistic perspective, we have come to see that the word is not the most significant unit in reading. Word bound reading instruction must be reconsidered in light of what is now known about the reading process.

Three kinds of information are available to the reader. One kind, the graphic information, reaches the reader visually. The other two, syntactic and semantic information, are supplied by the reader as he begins to process the visual input. Since the reader's goal is meaning, he uses as much or as little of each of these kinds of information as is necessary to get to the meaning. He makes predictions of the grammatical structure, using the control over language structure he learned when he learned oral language. He supplies semantic concepts to get the meaning from the structure. In turn his sense of syntactic structure and meaning make it possible to predict the graphic input so he is highly selective, sampling the print to confirm his prediction. In reading, what the reader thinks he sees is partly what he sees, but largely what he expects to see. As readers become more efficient, they use less and less graphic input.

Readers test the predictions they make by asking themselves if what they are reading makes sense and sounds like language. They also check themselves when the graphic input they predict is not there. In all this it is meaning which makes the system go. As long as readers are trying to get sense from what they read, they use their language competence to get to meaning. The extent to which a reader can get meaning from written language depends on how much related meaning he brings to it. That is why it is easier to read something for which the reader has a strong conceptual background.

Readers develop sampling strategies to pick only the most useful and necessary graphic cues. They develop prediction strategies to get to the underlying grammatical structure and to anticipate what they are likely to find in the print. They develop confirmation strategies to check on the validity of their predictions. And they have correction strategies to use when their predictions do not work out and they need to reprocess the graphic, syntactic, and semantic cues to get to the meaning.

When a reader's miscues are analyzed, the most important single indication of the reader's proficiency is the semantic acceptability of his miscues before correction. The reader's preoccupation with meaning will show in his miscues, because they will tend to result in language which still makes sense.

Even when readers produce nonwords they tend to retain the grammatical endings and intonation of the real word which is replaced. If they cannot quite get the meaning, they preserve the grammatical structure.

Effective readers also tend to correct miscues which result in a loss of meaning. They do this selectively. They will often not even be aware they have made miscues if meaning is not changed.

The reader, when he experiences difficulty, first asks himself what would make sense, what would fit the grammatical structure, and only after that what would match the graphic cues that would fit into the twin contexts of meaning and syntax. This keeps the value of graphic information in proper perspective and does not cause the reader to use any more information than is necessary.

Readers who are inefficient may be too much concerned with word-for-word accuracy. This may show in their miscues in a variety of ways, such as:

1. High degree of graphic correspondence between expected and observed responses in word substitution even when meaning is lost.

2. Frequent correction of miscues that do not affect the meaning.

3. Multiple attempts at getting a word's pronunciation even when it makes little difference to the comprehension of the story (proper names or foreign words, for example).

When the conceptual load in a particular selection gets too heavy for the reader he may begin to treat it as grammatical nonsense, manipulating the grammatical structure without getting to meaning. This may be reflected by a relatively high percentage of grammatical acceptability of miscues and relatively low percentage of meaning acceptability. If the reader is getting to the meaning both should be relatively high.

In judging how proficiently a reader is using the reading process, a teacher might use a procedure something like this:

1. Count the reader's miscues.

2. Subtract all those which are shifts to the reader's own dialect; these are not really miscues since they are what we would expect the reader to say in response to the print.

3. Count all the miscues which result in acceptable meaning but which are successfully corrected.

4. Count all miscues which result in unacceptable meaning but which are successfully corrected.

5. Add the miscues in steps 3 and 4. The result is the total number of miscues semantically acceptable or corrected.

This last score, expressed as a percentage of all miscues, is what we have come to call the comprehending score. It is a measure of the reader's ability to keep his focus successfully on meaning. It is a measure of the quality of the reader's miscues. What is important is not how many miscues a reader makes but what their effect on meaning is.

Emergence of New Methodology for Reading Instruction

With the new, revolutionary way of viewing reading and learning to read, a new methodology is gradually emerging. This is not a psycholinguistic method of teaching reading. Psycholinguistics is the foundation on which sound methodology must be built, but psycholinguistic knowledge does not automatically translate into a method of teaching reading.

Nor is miscue analysis a method of teaching reading. It is a technique for examining and evaluating the development of control of the reading process in learners. It can, in the hands of a knowledgable teacher, provide the basis for useful instruction. But it does not lead to a total method.

Rather, as we come to better understand the process we are trying to teach when we teach reading, we can examine current practices and methodology — keeping some, rejecting some, reshaping some, and adding some totally new elements.

What changes most is the perspective. But that is a pervasive change because it leads to a new set of criteria for judging what is of value in reading instruction.

This new perspective is process-centered, language-centered, meaning-centered. It requires a new respect for language, a new respect for the learner, and a new respect for the reading teacher.

Language is seen, in this developing methodology, as much more than the bag of words we use to think it was. It is a structured, systematic code which can be used to represent meaning. It is rule-governed; in fact the most important thing a child learns in learning a language is not the sound system or the vocabulary but the set of rules by which the language is controlled. Human language is a unique communication system because control of a relative small set of rules enables it users to say and understand utterances they have never heard before.

The role of language in human learning has not been fully appreciated until recently. Alone among living things man can use language, the symbolic system, to organize his thoughts. It is the medium of though and learning as well as the vehicle for communication.

But language, though wondrously complex, is no mystery. The basic process in which it is used to convey meaning is understandable. Teaching reading is helping a language user to

control the receptive written language process so that a message may be constructed by the reader which corresponds in high degree to that of the writer.

Language may be dissected and pulled apart into pieces to better understand its workings, but because it is a process, these pieces, sounds, words, phrases, cease to be language apart from whole language in use. Language is not encountered by the learner except as it is used when he learns to talk — yet he does learn to talk. Because we have not properly respected language, we have tended to think we facilitated learning to read by breaking written language into bite-size pieces for learners. Instead, we turned it from easy- to-learn language into hard-to-learn abstractions.

Language has another characteristic we are only now coming to understand. It changes constantly. Probably it must change or it could not serve the changing needs of its users. But over time variants of a single language move apart; dialects develop as groups of users who are out of touch with each other, or have different interests and views, move apart. Difference in language use develops between young and old as well, since change is less likely to affect the language learned by older users in an earlier era. We have tended not to understand the legitimacy of language difference and to think of difference as deficiency. In doing so we have confused many speakers of low status dialects as we sought to teach them to read. Furthermore, we have taught inappropriate generalizations for relating letters and spelling patterns to somebody else's sound system.

The *learner* of reading has a highly developed language competence which is his greatest resource in learning to read. In fact, the key to successful reading instruction is, as it has always been, in the learner. With a new respect for the learner, we can make learning to read and write an extension of the natural language learning the child has already accomplished without professional assistance.

The motivation for learning to read is intrinsic. Human language learning is driven by the need to communicate, to understand, and to be understood. If there are messages in written language which the readers care about, they will want to understand them.

All children have the ability to acquire language; all do learn except for the very small number who have extremely severe defects. In our quest for excuses for why we have not succeeded in teaching children to read, we have often sought to find deficiency in the learners.

We cannot use inability to learn language as such an excuse because all kids can learn it and almost all do. This universal human ability to learn language is not restricted to oral language. Deaf children born to deaf parents who use sign, a visual language form, will learn it as easily as children who can hear learn to talk. So also, all children can learn written language if they need it to function in a literate society. Schools must emphasize the functional need of children for written language.

If the written language children encounter right from the beginning is whole, real, natural, and relevant, they will be able to use their existing language competence as they learn to

read. We will be working *with* them rather than at cross purposes to them. Because we have not appreciated the linguistic competence of beginning readers, we have fractured written language into abstract bits and pieces and made the learners find out how to put it back together to get the sense. It is a tribute to the language learning ability of children that many of them have learned to read in spite of the obstacles placed in their way.

The *teachers* in this new methodology have a new and very important role to play. The teachers must come to understand the reading process so well that they can guide the progress of the learners. The teachers must know the signs of progress and be able to provide appropriate materials and instruction to aid the child's growth in proficiency.

In this new role the teacher is not the source of all knowledge for the learner. Rather, the teacher is helping the child to expand on his own competence. The teacher's knowledge of reading and how it is learned facilitates learning. The teacher does not need to teach the child about language. The child has a user's knowledge of language. Teaching him technical insights and terms will not help him learn to read. But the way he reacts to written language is based on his language competence. An informed teacher will be able to understand and interpret his reactions.

Instructional materials, if they are richly varied and well constructed, can make the teacher's job easier and help the teacher be more effective. But they cannot substitute for concerned, enlightened teachers.

Miscue analysis can be of great use to teachers in this task because of the specific and general insights it provides about the learner's strengths and weaknesses. His miscues reflect his control and use of the reading process.

Because the basis of the diagnosis is not rooted in a model of the process, in many diagnostic procedures the teacher is frequently advised to administer a dose of phonics regardless of the pattern the child has shown. Miscue analysis shows the process at work and will reveal changes in how this process is used.

One problem that plagues teachers is judging how much progress pupils are making toward reading proficiency. When we judge the progess of infants in learning oral language, we do it very simply. If they can make themselves understood, they are learning to talk; and if they can respond to what is said to them, they are making progress in listening. We judge, in other words, by the learners' success with the process as they use it. Reading also should be judged by the extent to which learners can undersand an increasing range of written materials.

We let ourselves confuse published reading tests with the competence in reading they are trying to assess. The subskill tests, skill check lists, and word lists do not test the ability to understand written language. They test, in large part, ability to perform with the abstract bits and pieces of language. Miscue analysis can bring us back to reality.

Making the Grade: Evaluating Writing in Conference

by Nancie Atwell

As teachers' understandings of writing change, so do our classroom practices. When we write, look closely at our own and our students' writing, and think about what we see, we begin to teach writing differently. We learn what writers do and need, and we design programs that will meet, support, and extend the development of children's writing abilities.

In addition to showing us how to teach, our understandings as writers and researchers prompt new expectations of our students. We begin to ask children to choose their own topics, writing out of their own needs, interests and areas of expertise. We ask, too, that they demonstrate commitment to their writing, devoting time to gathering, considering and ordering their ideas. We ask them to view the content of their writing as changeable, revising to meet their intentions and their readers' needs for clarity, logic and specificity. And we ask that they understand that readers need correctness; that proper use of conventions will make their writing readable.

Expectations like these grow from an understanding that writing isn't one ability, but a combination of many abilities: experimenting, planning, choosing, questioning, anticipating, organizing, reading, listening, reviewing, editing, and on and on. We know, too, that one piece of writing can't provide an accurate picture of a writer's abilities, but represents one step in a writer's slow growth toward control. The step might be a leap, as a fifth grader discovers she can experiment with different lead paragraphs until she finds one that works best for her story about the birth of her cat's kittens. The step might appear as a regression, as a first-grade writer-of-narratives composes a booklet of one-sentence labels describing a complicated machine in his father's shop. The step might be so small as to almost escape attention, as an eight-year-old famous for her careful erasing crosses out a single line in a draft of her letter to the principal.

Taken over time, over many drafts of many pieces, steps like these do provide pictures of individual writers: where they've been, where they are, and where they might go next. Teachers who save their students' writing know these pictures. We can see children's growth as writers—the topics they found, problems they encountered and ways they solved them, changes they made, and risks they took across the weeks and months that make a school year.

The nature of a student's growth may be clear to us as we page through a collection of his or her writing, but how does what we see translate into a letter or number on a report card? Our new understandings about writing, while changing our classroom practices, don't alter the fact that four or six times each year, most teachers are faced with putting a grade to our students' progress.

The school system where I teach issues quarterly report cards, and I'm required to provide a letter grade for my eighth graders' work in English. Since my English course is a writing program, the letter I put on the card is a writing grade.

In evaluating writing, I know my grading system has to take into account all the abilities that come into play when a writer writes and all of a writer's steps backward and forward toward proficiency. If I'm to do justice to writing as a rich, varied process of growth, I can't grade individual pieces of writing. Painful experiences with pieces of my own writing have shown me that it's hard to write well when trying new modes and chancing complex topics. Out of fairness to my students, wanting them to experiment and discover, I abandoned my rank book. In three years, no eighth grader has asked me to rate a piece of writing. A student writing about the death of his coonhound, his expertise as a lobsterman, or his anger over the principal's decision banning dirt bikes from the school's parking lot, isn't writing for a grade. He has his own criteria.

To look for writing growth, I collect all of my students' writing and file it chronologically in individual folders. Students number their drafts and clip these to their finished pieces. My eighth graders generally accumulate between four and seven finished pieces in their folders each quarter, so that by the end of each nine weeks, I have a mass of each writer's writing to consider. I know nine weeks is not a very long time, even when students write every day, for judging growth. However, given the constraints of a traditional reporting system, these collections of writing are the most reliable bases I have for individual evaluation.

My grading system has to reflect the expectations I communicate to my students in each day's writing class. If evaluation is to be valid, I can't turn around at the end of nine weeks and impose objective standards for "good" writing, grading accordingly. When a student tries her hand at a letter to the editor, attempting to persuade readers of the local paper to vote to close a nuclear power plant, it's the attempt I value first. The writer is trying a new mode—persuasion—and risking a wide, critical audience. I'll help her find and write down her feelings and reasons. I'll ask her to consider the attitudes and needs of her readers. But, when the letter is not particularly well-argued, I won't punish the attempt in my grade book or view it as a failure. My students have taught me that writing growth is seldom a linear progress, each piece representing an improvement over the last.

Students' grades must grow out of what their writing program asks them to do. The expectations I described in the opening of this chapter provide the scaffold for my evaluation. I am looking for each writer's growth in many areas—topic selection, level of involvement, degree of effort and risk-taking, consistency in editing and proofreading, completeness and clarity of content. In order to get at students' progress in these areas, I put my other writing-teacher roles on hold during the last week of each marking period, ask my students to rely on each other for response to pieces-in-progress, and spend class time conferring with individual writers on their work of the past quarter.

I hold evaluative conferences because I need my students' help in arriving at the grade I assign their work—they are, after all, the experts on those pages in their folders—and because they

need a time to sit back and give some serious thought to what they have done and want to do next in pieces of their writing. The conferences are for both of us.

I schedule five conferences for each fifty-minute writing class. Since ten minutes is too short a time to discuss all of a writer's work, I ask students to prepare by paging through their folders and deciding which pieces they are most and least satisfied with. This writing will serve as the basis for some talk about students' concepts of good writing and knowledge of what is and isn't working in pieces of their writing. I prepare for evaluation by looking through the writing folders and reviewing the entries I've made for each student in my writing conference journal.

The evaluative conference begins as in interview. The student and I sit next to each other, the writing folder in front of us. I ask questions and write down the writer's answers. My questions are concerned with how the student writes and thinks about writing. I've found it helpful and interesting to ask some of the same questions every quarter, because when answers change, this shows me something about my teaching and my students' learning.

In a given evaluative conference, depending on the writer and the writing, I choose from among questions like these (many of which I drew from the research of Don Graves, Lucy Calkins and Susan Sowers):

> What does one have to do in order to be a good writer?
> What is the hardest part of writing for you?
> What is the easiest part?
> Which are your best pieces of writing this quarter? What makes them best?
> Which piece or pieces are you lease satisfied with? Why?
> Where do your ideas for writing come from?
> Do you have any plans for what you want to write next?
> How do you go about making changes in your writing?
> Can you tell me why you made this change on your draft of this piece?
> What problems are you experiencing with your writing? What do you think you could do to solve them?
> What kinds of response help you most as a writer?
> Who gives you helpful response?

These are some basic questions: students' answers usually prompt new ones. I take down as much of their talk as I can. At the end of the interview, it's my turn to talk.

Based on what I've seen and noted in a student's writing of that quarter, I describe several specific areas needing the writer's attention. So the student isn't overwhelmed and has a manageable task, I limit these to two or three high priority concerns. As examples, I have asked eighth graders to work on:

Writing more about your personal knowledge—what you care or know about—and less on make-believe subjects.

Trying some different kinds of writing.

Sticking to one topic: narrowing the focus of your pieces.

Including more information about your topics.

Telling more about what you think and feel in your piece.

Experimenting with different leads or conclusions.

Devoting more time to your writing.

Devoting more effort to self-editing, and editing in a pen or pencil different in color from that of the text.

Using quotation marks when people talk.

Drafting in paragraphs.

Proofreading final copies for omissions.

Circling words that don't look right as you edit, then looking up their spellings.

Using periods: reading finished pieces aloud and listening for the places where your voice drops and stops.

I illustrate my suggestions by pointing out problems as they have occurred in pieces of the student's writing, and I explain why the problem is important in terms of the writer's growth and a reader's needs. I write down the concerns we've discussed, and so does the student. At the end of the next nine weeks, progress in these areas becomes part of the evaluation criteria for that student's writing.

At the end of the conference, I set a grade based on the accumulated evidence of the contents of the writing folder, progress made toward the goals set at the end of the previous evaluation conference, and the writer's thought and effort. I ask the student how he or she would grade the writing and why. Often, we agree, and I explain why I agree. When we don't, I explain what I saw that leads me to assign a different grade. This grade stands. One of my responsibilities as a teacher is to assess, and, in the end, the mark on the card reflects my assessment.

At our school, most teachers of grades K through eight evaluate their students' progress in quarterly conferences. Gloria Walter, Boothbay's seventh-grade English teacher, describes how evaluative conferences work for her: "My quarterly conferences give me another chance to do — in depth — what I went into teaching for: to talk with kids. And the talk is really valuable, because my questions are genuine and serious and their answers are so thoughtful … In terms of grading, I haven't had one protest about ranks since I began evaluating in conferences. The basis for the grade is right there in front of us."

A transcript of a conference between Mrs. Walter and Deedee, one of her students, illustrates how she makes writing evaluation an occasion for talk. Their conference takes place at a table at the back of Walter's classroom. They are conferring on Deedee's third quarter writing. In front of them, twenty-four seventh graders are going about their business writing, reading, responding, editing, thinking.

Mrs. Walter has pre-printed six questions on a form she's titled "Writing Conference Notes." She begins the conference by writing Deedee's name and the date, April 12, on this form, then asks her first question.

Walter: Deedee, what do you think someone has to do to be a good writer?
Deedee: Don't rush yourself and, sometimes, do lots of drafts.
Walter: Why lots of drafts?
Deedee: Because writers make their writing good by changing it 'til it sounds the way it should. To do that, you need lots of time.

(In November, in response to this question, Deedee said, "To be a good writer, you have to be smart, copy over a lot, and get a good education.")

Walter: Deedee, what's the hardest part of writing for you?
Deedee: Starting to write is always hardest for me. Sometimes I think I'm never going to get an idea.
Walter: But you do get ideas. Where do they come from?
Deedee: My best way is to just sit and think about things I've done and then decide which one I want to write about.
Walter: How do you decide?
Deedee: Really, it's just what's most interesting to me.
Walter: What's the easiest part of writing for you?
Deedee: First drafts. Once I start, I just write and write.
Walter: So it comes easily, once you get an idea?
Deedee: Yeah, but then it gets hard again, when I read back over it and find I want to start changing it.
Walter: Which is your best piece of this quarter?
Deedee: Definitely this one. (She picks up her choice.)
Walter: "The Magic Sled?" Why's this one the best?
Deedee: I spent alot more time on this one, and I though about it more.

(In November's conference, Deedee characterized the qualities of that quarter's best piece as "good spelling and pretty good cursive.")

Walter: Which piece are you least happy with?
Deedee: The one about the car accident. I hate the beginning, and I still can't think of any way to revise it so it works better.
Walter: When you make changes in your writing, how do you decide what to revise?
Deedee: Sometimes other people's questions help, like my mother's, but mostly by reading it to myself. I pretty much change what doesn't sound right to me.
Walter: Okay, Deedee, based on the writing you did this quarter, there are a couple of things I've seen that you really need to concentrate on. We've talked about both of these lately in conference. The first is including more of your own thoughts and feelings in your pieces. Do you know what I mean by this?
Deedee: Yeah, like when the boat tipped over in my fishing story, and I didn't tell what I

was thinking.

Walter: That's right. When you tell your feelings, your reader has an easier time experiencing the story with you. Now, the other thing I'd like you to think about is including details to meet your reader's need for specific information. Do you know why this is important?

Deedee: It makes things seem more real. And it gives readers something to think about. Like in *Lisa, Bright and Dark,* where the author doesn't just tell you Lisa is crazy. He shows you what she says and does, and he teaches you about psychology, too.

Walter: That helps you as a reader?

Deedee: Yeah, it makes it more interesting.

Walter: Okay, Deedee. let's figure out a grade for this quarter. Last time, your grade was B+. Since then, you've tried some different kinds of writing, like your poems and script; you've worked on revising so your pieces make better sense; and you've done well with narrowing your topics — for instance, the way you made the babysitting piece specifically about one incident. I think that since you've shown growth in all these areas, this is A- work. What do you think?

Deedee: All right! I've been thinking I'd get an A this time.

Walter: Well, good. We agree. Thank you, Deedee.

At the heart of the evaluative conference is the teacher's knowledge or writing and her students as writers. As writers' levels of development differ through the grades, so do the expectations that shape teachers' instruction and, in turn, the questions that shape their conferences. For example, a second-grade teacher will look for and ask about a writer's invented spellings, knowledge of the functions of punctuation, willingness to change his or her writing, ability to sequence information, and growing sense of audience. She will also ask many of the same questions Gloria Walter and I ask — about concepts of good writing, topic selection and problem solving — because these are concerns for writers at any level.

Evaluating writing in this way takes time. I think the time is worth it. When I give over my English course to writing, and when my writing program is based on what writers do and need, I'm giving my students clear signals about my belief in the importance of their knowledge and experiences. Making evaluation an occasion for us to analyze their writing together gives another chance to extend their involvement and growth. Equally important, the evaluative conference is another occasion for my learning more about my students and their writing.

Lessons In Spelling

by Ruth Scott

I recently spent a morning in a small elementary school which has an enrolment of fewer than two hundred students. Several weeks before, in my role as a Language Arts consultant, I had spent a full day planning a unit of study with the staff of this school. They were interested in developing a school-wide theme which would enrich the students' appreciation of a dramatic production and a ballet soon to be performed at the school. We became excited by the prospect of cross-grade groupings and inter-disciplinary activities, and developed a plan for rotating groups of students through a variety of stimulating experiences. On this day, I was to visit the classes and observe the children at work.

As I moved from one area to the next, I was impressed and excited by the enthusiasm and diligence of the students. In one corner, children were reading excerpts from the upcoming play and using the descriptive passages to create a map of the mythical kingdom. In another area, groups of students concentrated intently on pantomime skits performed by their peers. Other children created mythical creatures based on a combination of two familiar animals such as giraffe and bear (a bearaffe!). In the gymnasium a former ballet teacher showed the children the basic ballet positions, and helped them to appreciate the demanding athletic skills underlying this art form. Still other children listened quietly while a melody was played on a synthesizer using a variety of background instruments and tempos. This activity led to a thoughtful discussion of how music helps to create mood in a dramatic production. Everywhere I went, I saw eyes shining with delight and satisfaction.

Well, almost everywhere. In one classroom, the teacher proudly showed me what each group was doing. As she brushed past the final group, she said, "These three couldn't settle down, so they're doing spelling." The delinquent trio sat quietly copying words from a spelling text which was at least fifteen years out of date. They surely would learn their lesson.

But what lesson would they learn? That it doesn't pay to "fool around"? Probably. More significantly, however, they would learn that spelling is not fun. Spelling is drudgery, and it keeps you from doing the exciting and satisfying things that make going to school worthwhile.

Traditional Approaches to Spelling

Over the years, students have been taught many "lessons" about spelling. The spelling system, until recently, was viewed as a somewhat chaotic maze of unreliable rules. If a word could not be spelled by sounding it out, it simply had to be memorized. The acquisition of spelling skills was seen as a low-level memory task, and the pedagogy for teaching spelling was consistent with this perception. Students became adept at writing lists of isolated words ten times each in preparation for weekly spelling quizzes. Spelling was approached as a subject

in itself, and little attempt was made to integrate it meaningfully into other aspects of the curriculum.

Because spelling was viewed as a simple task of memorization, students who were poor spellers were classified in one of two ways — stupid or lazy. One of my most enduring memories of elementary school occurred around Christmas of my Grade 8 year. Our teacher was dissatisfied with recent test results on weekly spelling tests, and declared that anyone with more than five errors on the next test would be strapped. At least one third of the class committed more than five errors that Friday, and each "offender" was strapped. My friends who had not studied for the test probably found solace in the belief that they were, indeed, lazy. I wonder, on the other hand, how many of those who had studied hard became convinced that they were stupid.

The teacher above was not, by nature, a cruel or unfeeling individual. He was simply reacting to the educational philosophy of the time, that product was paramount. A student who could not spell could not produce a product which was free of errors. No attention was paid to the process through which the product was created, and relatively little emphasis was placed on the quality of ideas found in the work. As students, we were being groomed for the provincial Grade 13 English finals a few years down the road, in which more than three major errors in grammar or spelling would automatically constitute a failure regardless of the depth of interpretation displayed by the student. One can only speculate on how many potential professionals had their career goals redirected because they had failed to master the conventions of English spelling system.

Recent Approaches to Spelling

Mercifully, the educational pendulum swings, and we no longer strap students for committing spelling errors, or deny them entrance to university on the basis of grammar or spelling alone. The same Ministry of Education which set the infamous Grade 13 departmental exams now advocates a child-centred classroom. Rather than stressing the products created by students, the process is seen as having the greatest relevance. Perhaps the most profound innovations have occurred in the area of writing. The process approach to writing, advocated by respected educators such as Donald Graves, places great emphasis on the various stages of the composing process, and encourages children to use writing as a mean of personal expression. Writing folders, teacher-student and peer conferences, and the enthusiastic sharing of completed work, have all contributed to a happier, more satisfying classroom experience. In the child-centred classroom, few students pick up the message that they are "stupid".

Any radical swing of the educational pendulum, however, brings with it the danger of over-simplification. Advocates of a new approach are sometimes so carried away by the enthusiasm of the moment that they fall prey to methodological extremism. To use a more common metaphor, they "throw the baby out with the bath water".

In recent years, spelling as a skill has often been the victim of just such a phenomenon. Whereas students once were chastised for their failure to master the conventions of English

spelling, many are now told that spelling is unimportant. Formal spelling programs, and commercial spellers in particular, are often scorned as being incompatible with a child-centred curriculum. It is felt by many that students will become competent spellers simply by having opportunities to write on a regular basis. When spelling is addressed, it is often done so in an incidental fashion by pointing out errors during writing conferences, or by developing lists of theme words for study.

A strong writing program based on the process model is to be applauded. Students need to feel free to concentrate on their ideas in the draft stages of writing without being confined to the use of words they know how to spell. Unfortunately, many educators have over-generalized this principle and have concluded that spelling itself is an unimportant skill. Similarly, individual conferences regarding spelling problems are an excellent way of relating the teaching of spelling to the particular needs of each student. Nevertheless, such conferences do not constitute, in themselves, an adequate foundation in spelling for most students.

Both the traditional view of spelling as a low-level memory task and the more recent theory that spelling can be mastered by "osmosis" in the acts of reading and writing, are based on overly-simplified views of English orthography and of the cognitive and perceptual demands which spelling places on the learner. Neither approach can be supported by the important research findings in spelling over the last fifteen years.

Linguistic Analysis of the English Spelling System

The first major inroads in understanding the nature of learning to spell came as a result of new insights into the English spelling system itself. Prior to the late sixties, few linguists had probed beneath the grapho-phonemic level of orthography. Since less than half the words in English conform to straightforward sound-symbol correspondences, it was concluded that the English spelling system is highly irregular. The work of such linguists as Chomsky and Halle (1968) and Venezky (1976), however, radically altered these perceptions. Within the framework of transformational grammar, Chomsky and Halle outlined patterns in English orthography which lie at a deeper level than the surface phonetic forms. These patterns, though complex, are so pronounced that Chomsky concludes that conventional orthography is a "near optimal system for representing the spoken language" (Chomsky, 1970). The essence of learning to spell, in this framework, is to shift gradually from a reliance on the phonetic forms of the language to the more abstract lexical or meaning levels of orthography.

The lexical spelling of a word is the way in which it is spelled in the lexicon or dictionary of the language. Therefore, two homophones such as "hear" and "here" may have identical phonological components, yet have different lexical spellings. It is this feature of English orthography which has frustrated teachers and students over the years. There have been many attempted in the past to "reform" the spelling system so that all words are spelled as they sound. Thus, "here" and "hear" would be spelled an identical fashion depending upon which symbols were selected to represent each of the sounds in the word. Similarly, students

would no longer need to be burdened with the task of remembering alternate spellings of various sounds in the language, as in the case of *go*, *know*, *toe*, and *sew*.

Modern linguists would argue, however, that such reforms would rob the language of its richness and would, in fact, create more problems than they would solve. To begin with, there are definite limitations on the number of ways in which a specific sound can be represented in print. In the examples above, most of the words are members of word families. Therefore, *go* is spelled the same way as *so* and *no*; *know* is part of the word family which includes *grow*, *throw*, and *low*; *toe* can be linked with *foe* and *doe*. Only *sew* appears to stand on its own. There are also restrictions on the positioning of letters within words to represent specific sounds. The consonant digraph *gh* can represent the sound /f/ only at the end of a word, as in *rough*. It would be unacceptable to use this digraph at the beginning of a word to spell, for instance, *fall* as *ghall*. Therefore, although there are variations in the ways in which sounds can be represented, most examples can be grouped into larger patterns to ease the burden on memory.

The most significant advantage afforded by lexical spellings, however, is in the area of meaning. A fundamental principle underlying English orthography is the fact that words that mean the same are usually spelled the same. Therefore, a student who understands the word *know* is able to deduce the meaning of *knowledge* or *knowledgeable*. If a strict sound/symbol rule were applied to the language, the word *know* would be spelled the same as *no*, regardless of whether it meant "negative" or "to understand". It would be much more difficult, then, for the student to grasp the meaning of a related word such as *knowledge*, since there would be no way of determining which related meaning applied.

The "meaning connection" provided by lexical spelling is also very useful as an aid to conventional spelling. Many spelling errors among older students occur with schwa vowels, the vowel sound created by short vowels in unaccented syllables. The letter *e* in *competition*, for example, is difficult to remember because the schwa vowel sound is not well-articulated in speech. The student who relies on sound to determine spelling will be severely handicapped by the schwa phenomenon in English orthography. One method of overcoming this difficulty is to memorize the fact that *competition* contains the letter *e*. Considering the frequency of schwa vowels in English, however, this method is certain to be cumbersome and inefficient. The student who has grasped the spelling/meaning connection will use this principle to advantage in many instances where a schwa vowel presents a problem for spelling. In the case of *competition*, the base word *compete* will be recalled. In the base form, the *e* is a long vowel, and thus is easy to spell. Since words which are related in meaning are usually spelled the same, a correct deduction could be made that the schwa vowel in *competition* relates to the spelling in *compete*. The meaning principle is equally useful as an aid to spelling silent consonants in many words. The *g* in *sign* is difficult to remember since it is silent, but in the related word *signal*, the *g* is sounded. Similar relationships occur with muscle/muscular, bomb/bombard, soft/soften, and so forth.

Modern linguistic theory, therefore, has shown that English orthography is anything but an irrational system of unreliable rules. It is an essentially orderly system when viewed

from a lexical rather than strictly phonetic perspective. On the other hand, it is a much more complex system than previously acknowledged. In addition to the principles already described, the speller must also incorporate rules governing syntactic relationships such as affixes, prefixes and suffixes, possessives, and contractions. A final source of complexity arises from the many words in English which have been borrowed from other languages and reflect the particular patterns inherent in the orthography of the parent language.

Had the advances in research in the area of spelling been confined to an analysis of the spelling system, the influence on spelling instruction may not have been startling. The theories of transformational grammar would have called into question the emphasis on memorization, and subsequently would have weakened the perceptual approach to the acquisition of spelling skills. We would probably have marvelled that anyone could master the complexities of English orthography. At the same time, however, students who failed to learn the conventions of spelling would not have benefited greatly from the revelation that the system was, indeed, complex. Until we knew more about how children learn to spell, the intriguing insights into the patterns underlying our language would have remained essentially on a theoretical plane. A notable exception to this observation is Carol Chomsky who, in 1970, made a number of recommendations about spelling instruction which she inferred from the findings of transformational grammar (Chomsky, C. 1970). Her observations remain largely supported by subsequent research in the seventies and eighties.

Developmental Nature of Learning to Spell

At the same time that advances were being made in the understanding of English orthography, breakthrough discoveries were also being made into the ways in which children learn to spell. Read (1971, 1975) examined the error patterns of preschool and primary aged children and found a remarkable consistency in their attempts to spell words they did not know. He demonstrated that the logic children use in spelling changes developmentally over time as their experience with modern English spelling broadens (Henderson, 1985). Other researchers (Henderson and Beers, 1980) tested the generality of these Stages of word knowledge across the spectrum of children and mapped their development across the grades. They conclude that these Stages of word knowledge have wide generality across methods of instruction, levels of intelligence, economic status, dialect and even languages (Henderson, 1985, p.40).

Henderson and Beers divide the developmental stages of word knowledge into five periods or stages, admitting the somewhat arbitrary nature of the divisions. Stage 1 encompasses the understanding of written language that children attain before they begin to learn to read. Very young children make random marks with crayon or pencil, then gradually move to actual pictures, and finally to letters, although the letters do not correspond to specific sounds. Stage 2 is called the "letter-name" stage, in which alphabetic writing occurs. Children by this time have grasped the concept of "word" and map letters onto the sounds in a word. They choose letters, however, on the basis of the sound of the letter's name. Therefore, the word *are* is likely to be spelled *R*, *you* is spelled *U*, and so forth. Children at this stage have a remarkable ability to discriminate sounds that adults no longer hear. For example, *truck* will

be spelled as *CHROK* or *dragon* as *JRAGN*. Children at Stage 2 also demonstrate consistent patterns for representing short vowels. They substitute the name letter vowel that is closest to the point of articulation in the mouth as the specific short vowel. Therefore, short *a* is spelled with an *A*, short *e* with *A*, short *i* with *E*, short *o* with *I*, short *u* with *O*, and short *oo* with *U*. In making these substitutions, children are relying on their natural sense of sound discrimination and on their keen and accurate perceptions (Henderson, 1985).

Important changes in spelling strategy occur in Stage 3 when children gradually abandon the letter-name approach and begin to experiment with patterns of letters within words. Their developing bank of sight words, fostered by their reading experiences, enables them to spell words such as *pail*, *seen*, and *dime* correctly or in forms such as these: *PALE*, *SENE*, and *DIAM*. Children at this stage also begin to spell the short vowels correctly and to demonstrate greater proficiency with blends such as *st*, *dr*, *tr*. The ability to master within-word patterns is a far more demanding task than the direct matching plan of the letter-name strategy. This is a mental operation that requires relational thinking, in contrast to "one-at-a-time" thinking (Henderson, 1985).

Many observers of the young child's attempts to master the conventions of English spelling refer to the process as "invented spelling". This term is meant to reflect the child's active involvement in generating hypotheses about the orthographic system. It should be noted that even at Stage 3, which for most children coincides roughly with late Grade 2 or 3, the child's hypotheses are basically restricted to the grapho-phonemic level of orthography. Apart from some elementary understanding of simple affixes, few attempts are made to explore lexical patterns including derivational relationships, homophones, possessives, contractions, prefixes and suffixes – to name just a few skills which must be acquired by the competent speller. It is of concern that, until the recent findings of Henderson and Beers, most descriptions of invented spelling stopped at the within-word pattern stage and simply designated the next stage as "conventional spelling". By virtually ignoring the complex syntactic and semantic patterns which lie at the deeper layers of the spelling system, such schema promote an overly simplified view of the demands placed upon the speller, and imply equally inadequate instructional techniques.

According to the Henderson and Beers model, toward the end of Stage 3 children extend their exploration of vowel patterns to include meaning patterns. Inflectional endings are related to meaning, as in the case of *ed* signifying the past tense whether it is pronounced *d* as in *planned* or *t* as in *stepped*. Children also begin to grapple with the concept of homophones. Homophones exemplify the basic meaning principle – things that mean alike are spelled alike; things that mean differently are spelled differently (Henderson, 1985). The meaning components of simple prefixes and suffixes are also explored.

In Stage 4 children become more adept at spelling polysyllabic words. In order to do so, they must understand the features of syllable juncture, particularly the concept of doubling consonants to mark or maintain the short English vowel. They learn, for example, that the past tense of *pat* must be spelled *patted*, not *pated*, whereas the past tense or *skate* is *skated*, not *skatted*. This knowledge is also applied to adding *ing*, and is, in fact, the basic juncture

principle for all words of two or more syllables. Most children do not reach this stage until the junior division, after extensive exposure to print forms throughout the primary years.

The final stage identified by Henderson and Beers is one in which children synthesize their accumulated knowledge of the spelling system and are able to cope with derivational principles. They began their exploration of orthography using the simple alphabetic principle in which sounds are mapped to letters. Gradually they moved to an understanding of patterns, first focusing on vowel patterns and then progressing to meaning patterns. This knowledge was then applied to polysyllabic words. Few children reach this plateau until the intermediate division, and its refinement continues throughout adulthood. When a speller is able to move freely from base words to derivatives, taking into account prefixes and suffixes and other linguistic information, the world of vocabulary as well as spelling is opened for inspection. This stage is potentially the most interesting for the teacher, as the "rules" and regularities that children must come to grips with can be discussed in ways that challenge the teacher as well as the children to discover the underlying principles. Teachers who capitalize on these opportunities will find that there is a wealth of exciting and worthwhile discovery work to be done linking vocabulary and spelling with children who have reached this stage.

These insights into the English spelling system and the developmental nature of learning to spell reveal remarkable similarities. Children begin to examine the surface grapho-phonemic layer of orthography and gradually, but systematically, progress to the syntactic and semantic levels. The deeper layers of the spelling system are based on more abstract principles, and children do not fully grasp these patterns until their thought processes move from concrete to increasingly abstract functions.

Implications for Curriculum

The important research findings of the past fifteen years necessitate a re-examination of the role of spelling in the school curriculum. In the traditional curriculum, spelling was given a position of prominence. Unfortunately, since so little was known either about the spelling system or the process of learning to spell, spelling instruction focused on rote memorization rather than concept formation. Current research does not negate the importance of perceptual skills in spelling; students must be able to retain clear visual images of a bank of sight words, particularly those which do not conform to common patterns. Likewise, auditory skills are vital when hearing and reproducing sequences of sounds in graphic form. Many traditional spelling techniques based on the perceptual approach are useful in helping students to examine words carefully. The weakness of the traditional approach, however, is that it views spelling in isolation from the broader context of curriculum. The goal of the perceptual approach is to teach the spelling of words; the developmental approach uses the spelling of words merely as a starting point. The overriding purpose is to help students form concepts about language which they can apply to all aspects of the curriculum.

In reaction to the isolated skill-drill methods arising from traditional spelling programs, recent practices in language arts have tended to minimize the importance of spelling as a skill. Spelling tends to be viewed as a "cosmetic" feature of language to be addressed only in

the final editing stages of writing. It is assumed by many that students will progress along the developmental continuum of spelling through a language arts program which affords frequent opportunities to read and write. An analogy is often drawn with the child's development in oral language. Parents do not formally teach oral langauge, yet almost all children have incorporated very sophisticated speech patterns into their language before arriving in kindergarten.

This approach to spelling, however, is also limited. The comparison between learning to spell and learning to speak is inappropriate on at least two counts. To begin with, the exposure children have to oral language is continuous through the day, whether at home or school. Apart from times of solitary reflection (an infrequent occurrence in childhood!), children are immersed in an oral environment from the moment of birth. In a school setting, the contact with print is much less intensive. So many aspects of curriculum involve non-print activities that even the most conscientious teacher cannot hope to replicate the intensity of exposure to oral language.

Another factor which weakens the analogy between learning to speak and learning to spell is that the standards of "correctness" are considerably more exacting in spelling. A speaker is able to rephrase an idea in various ways if communication is unclear and to use voice modulation, gestures, and other body language to enhance the message. Furthermore, in only the most formal speaking situations do we demand strict adherence to grammatical conventions. Sentence fragments, run-on sentences, and faulty pronoun references are but a few features of oral language which are common in everyday speech. In spelling, however, there is almost no leeway for what is considered correct or incorrect. Beyond the stage of invented spelling, words which conform to conventional spelling must contain the proper letters in the correct sequence. While there are regional and historical variations in dialect and patterns of speech, lexical spelling has shown itself to be highly resistant to historical change (Chomsky, C., 1970).

The above statements do not negate the possibility that some children may learn to spell without formal instruction. These children, however, are in a minority (Templeton, 1986). The basis for developing concepts about written language is the ability to examine words carefully and logically. Most children require support for this process in an environment which encourages attempts to "make sense" of English orthography.

Viewing language as an object of study is consistent with recent trends in metalinguistic theory. Children's metalinguistic development reflects their growing awareness of certain properties of language and their ability to make linguistic forms themselves the object of analysis (Yaden & Templeton, 1986). When children analyze the spelling system and discover patterns appropriate to their stage of development, English orthography is no longer an intangible foe but rather an ally in their quest to make sense of all aspects of language.

How children should be supported in their developing understanding of the spelling system remains a crucial question. In reviewing the research in linguistic analysis of English spelling and the developmental view of learning to spell, Read and Hodges (1982) conclude that the

instructional implications of these findings "pose one of the most significant challenges for curriculum developers in the long heritage of this school subject."

Ideally, a teacher knowledgeable about orthographic patterns and sensitive to the developmental stages of spelling growth could utilize classroom experiences to provide a fully-integrated spelling program. The demands of this task, however, should not be underestimated. It is not enough to choose a list of words each week from those themes, current reading, or the child's personal errors and have the child memorize the spelling of each word. It is often assumed that words selected in this manner are preferable to those presented in spelling texts because they are derived from a meaningful context, the child's learning environment. Unless these words are also chosen to represent patterns and principles in orthography, expanded to include other words conforming to the same patterns, and applied through writing experiences and meaningful exercises, they will not, in themselves, constitute an adequate spelling program. The most meaningful context is that of language itself.

Many teachers may choose to use a carefully planned commercial speller based on up-to-date research in the field of spelling. The patterns and concepts addressed in the speller must then be reinforced and applied through personal writing conferences, activity centres, reading experiences in all subject areas, and so forth. A comprehensive spelling program, whether developed by a knowledgeable teacher or presented in a well-constructed spelling series, can provide the critical knowledge base for growth in spelling: a systematic presentation and study of the major spelling patterns in the English language (Templeton, 1986).

The three "delinquent" students described at the beginning of this paper clearly do not see spelling as an integral part of their overall language environment. They are passive recipients of lists of words meant to provide punishment for their overly-active natures. How much better it would be if their natural curiosity and exuberance could be directed towards playing with language and discovering the fascinating games that can be associated with words. As they mature, their developing understanding of the patterns underlying the English language will aid them in their acquisition of new vocabulary, and will give them more sophisticated tools for expressing their thoughts and ideas in verbal or written forms. From their reading they will derive further insights into the structure of language, which they can then apply through purposeful writing. Henderson and Templeton (1985) conclude that "spelling is thus pivotal to both reading and writing; in this sense it is central to the meaning and acquisition of literacy".

In a similar vein, Marjorie Frank (1979), in her immensely popular book about creative writing maintains, " There is no rivalry between skills and creativity. Good writing is based on a healthy friendship between imagination and technique. It can and must be taught without slighting either ".

The friendship between formal spelling and a child-centred curriculum has been needlessly strained as of late. The relationship must be repaired, or our children will be the ultimate losers. The combination of a strong process-oriented writing program and a well-constructed

formal spelling program should be fundamental to any curriculum which professes to promote literacy.

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Using Computers as an Integral Aspect of Elementary Language Arts Instruction: Paradoxes, Problems, and Promise

by Larry Miller and J. Dale Burnett

The role of computers in education may be approaching an important crossroads as unqualified support for their use begins to erode. Seymour Papert's vision of creative computer use, which he described in *Mindstorms* (1980), has become a focal point for critics skeptical of technology's impact and usefulness in education (Sloan, 1984). Paradoxically, the use of drill and practice programs, considered by many writers, including Papert, to be one of the reasons the potential of computers in education has not been realized fully, now attracts defenders (Marsh, 1985-86; Siegel & Davis, Chapter 7 of this volume). Naive optimism is predictable whenever innovation is introduced into schools, as attested by the initial claims of an earlier era concerning the impact of typewriters in improving the quality of children's writing. Today, there continues to be confusion about the place of computer technology in education and how it can be used best, if at all.

Many of the controversies surrounding the use of microcomputers in education are similar to those debated currently in the area of language arts such as whether reading should be taught as a series of subskills, with an initial emphasis on decoding, or fostered as a holistic process, with an early and continuing focus on meaning. However, technology also has spawned several unique issues. Spache and Spache (1986), for example, raised an argument against using computers in reading instruction by citing cost considerations. Authors such as Ohanian (1984) acknowledge the potential motivating power of the computer but worry that poorly designed software may stifle rather than enhance children's interest in reading. Balajthy (1986) described many technical and educational issues that require consideration as to technology's place in language arts education. For example, Balajthy noticed that print legibility once again has become an important issue for publishers and educators.

The goal of this chapter is to illustrate how two opposing views of reading instruction raise different issues and suggest different viewpoints concerning classroom computer use. For this purpose we will portray two teachers, one espousing a subskill perspective in reading instruction and the other a holistic orientation, as they attempt to use technology productively in their classrooms. Our descriptions of the existing problems and paradoxes facing these teachers may seem that we are portraying a bleak picture of computer use, but this is not the case: Solutions exist for many of these quandaries. Although there are difficulties in integrating computers into language arts instruction, we contend that knowledgeable teachers can overcome many of them. However, if teachers do not see the computer as an integral component of schooling that occupies a natural place in their instructional approach, then some of the predications concerning technology's failures may be realized.

A Subskill Perspective

Many of the contentious issues concerning computer use in education have their roots in learning theory, and in one's understanding of how language is acquired and processed (Pearson, 1984), rather than in technology itself. Samuels (1980) noted that reductionist and holistic views of language processing and instruction have existed for centuries, and although he attempted to reconcile many of the differences between the two positions, the debate concerning the value of these views, which endures generally, has specifically spilled over into technology's role in fostering literacy.

A classic example of this situation is the ongoing controversy over the value and use of subskill-oriented drill and practice programs. Early critics contended that drill and practice failed to tap the potential of the computer's power and versatility, but Roblyer (1982) defended their use by pointing out that some courseware does not need the full capabilities of the computer. He argued that as long as the educational goal is clear, and the computer can carry out the task, it presents a worthy application. Grabe (1986) defended computerized drill and practice when he observed that children often complete stacks of dittoed worksheets, and that they may as well carry out these low-level, frequently boring activities on computers.

Few authors base their attacks on, or defense of, drill and practice programs on theories of learning, yet logically this is the key to their use. An exception is Lesgold (1983) who, focusing on the area of reading, contended that microcomputers can be used best to provide pleasant practice in developing automatic word recognition skills rather than to teach higher level activities. His view did not emanate from technological considerations; instead, he based his ideas on research showing a positive relationship between decoding speed and comprehension (Perfetti & Lesgold, 1979; Lesgold & Perfetti, 1978). High correlations between reading speed and comprehension prompted Lesgold to consider rapid decoding the key to efficient reading. This view concerning the importance of automaticity in decoding also is supported by the research of LaBerge and Samuels (1974).

Although we do not accept Lesgold's vision of computer use in teaching reading, there is a congruency between his ideas of how print is processed and how one should use computer-based instruction. Lesgold put aside arguments based on graphics, memory capacity, and data collection, concentrating instead on a theoretical view of language processing and learning, and his technological applications are consonant with his notion of where the important issues reside. His beliefs about applications of computer technology and how language is processed are congruent, and although simply developing a theoretically consistent stance in applying computers to language arts instruction does not eliminate debate, it does focus discussion on critical issues.

The issue whether subskill-oriented approaches have a place in language arts instruction does not end with a theoretical justification of their general use. Accepting this position means that significant questions proceeding from it will surface. How many subskills are there in reading? Is there a justifiable hierarchy of these skills? Is it possible to measure mastery of

these skills? Can subskills be taught? These are just four of the perennial questions facing anyone attempting to develop a reductionist approach in reading instruction, and these issues extend to attempts to apply this orientation to computer-assisted instruction.

Rebecca's Quandary

To illustrate the paradoxes, problems, and promise of computer use in an elementary school setting, consider the situation of Rebecca, a second-grade teacher with 10 years' experience who uses a subskill approach to language arts instruction, in this instance reading. She has worked through many of the general problems mentioned above by adopting Otto's notions on the value and application of subskills (Otto, 1977). Thus, she does not adhere to a strict hierarchy of subskills but instead uses them to focus instruction, and she provides ample follow-up opportunities for students to integrate the subskills using realistic print situations.

Introducing computers into this context would appear to be easy and natural, as there are numerous computer programs available that use a reductionist approach, whether by design or serendipity (Rubin, 1983; Reinking, Kling, & Harper, in press). However, close examination of these programs presents Rebecca with her first problem because frequently exercises present print only at the letter or word level. Her attempts to use computer-based activities to help her students develop vocabulary and comprehension skills are frustrated by a lack of software in these areas. Moreover, she notices that most programs provide little or no opportunity for students to use the skills taught or to practice them in any meaningful way.

A second problem is encountered when Rebecca observes that computer programs often use methods of instruction or provide practice in a manner different from those typically used in regular classroom situations. For example, she uses an analytic approach in teaching decoding skills; however, when she examines one program, she discovers that its format follows a synthetic approach. Other programs, using computers equipped with voice synthesizers, also employ a synthetic approach to decoding, and although the technology is advanced, the use of such programs might confuse rather than enlighten her students. Thus, Rebecca must seek out programs that are congruent with her usual approach to instruction.

Because Rebecca uses a modified basal approach in teaching reading, it makes sense to use computer-assisted instruction that complements her particular series. Unfortunately, the company that publishes her basal series has not produced a matching computer courseware package, and she must therefore examine programs that claim to be compatible with any textbook approach. Such a claim is easy to make, but close examination of one package reveals several incongruencies between the computer-based lessons and her approach to reading instruction. Rebecca does stress decoding in her class, but with the emphasis placed on initial consonants and consonant clusters; in one computer package, many of the exercises focus on single vowels, vowel clusters, and vowels followed by r or l. Having these additional activities available may appear to be an advantage, but if Rebecca does not use them she is purchasing software with a limited value. Although the program permits the selection of

only those activities relevant to her approach, Rebecca discovers much of the computer-based program to be inconsistent with the emphasis in her teaching.

Rebecca is aware of the frequent complaint of critics that many computer-based reading activities resemble those found in existing basal workbooks, providing practice but little or no instruction (Balajthy, chapter 3 of this volume; Wheeler, 1983). With this caveat in mind she examines a variety of programs, seeking those that offer useful instruction along with practice and opportunities for integrating the skills. Because she teaches second grade, Rebecca is especially concerned about the language used to instruct the learner. This facet of instruction is especially important in computer-based learning because the teacher may be unavailable to assist the student having difficulty. The computer, however, may offer unique advantages for assisting students during independent reading (Reinking, chapter 1 of this volume).

After previewing several computer-assisted instruction programs, Rebecca discovers two negative traits compounding her difficulties in finding useful software that provides both instruction and practice. First, what many publishers call instruction she thinks is only practice. For example, in one program students are required to select the main idea of a passage from among four choices. If the response is incorrect, the computer gives "immediate feedback" as to the correctness of the answer, requesting another choice or directing the student to similar but supposedly easier passages requiring the same skill. In Rebecca's mind, this does not qualify as instruction. In another instance, she discovers that the language of instruction is complex and difficult for the students to understand. She believes that anyone who can read and comprehend the instructions probably doesn't need the skill exercise itself. This problem is similar to the one raised by Osborn's (1984) evaluation of workbooks that accompany basal reading series.

Automatic record keeping is cited frequently as one of computer-assisted instruction's prime qualities, so Rebecca wants to select programs that allow her to monitor students' abilities and their progress toward learning goals. She finds no shortage of such programs. Because many software evaluation schemes consider record keeping an important factor, publishers frequently include a record-keeping component in their software. By creating graphs of each student's performance and using the printout capabilities of the computer program, she can make hard copies for permanent records as well as for parent/teacher conferences. However, upon close inspection of several programs having a record-keeping component, Rebecca discovers an important limitation. Performance is often measured in a gross manner; specific weaknesses are not recorded. Thus, in a word identification program, the only information available is that Kevin missed 8 out of 20 words. This information provides Rebecca little useful information to guide instruction.

Rebecca's Solution

So what happens to Rebecca's quest to use computers as a natural aspect of her language arts program? A pessimist might contend that the obstacles outweigh the virtues, and when pragmatic factors such as time and expense are included, perhaps Rebecca should

be content with her conventional options for instruction. Rebecca, however, takes several positive steps to select and integrate into the classroom software that is compatible with her espoused theory. The key to her use of computers and selection of software is the decision to consider learning first and technology second (Miller & Burnett, 1986). There are many confounding factors in making computers an integral aspect of learning, but informed decisions can be made in this instance because Rebecca has analyzed her needs. When quality software, congruent with her theoretical stance, is available, Rebecca can make technology one component of instruction; when it does not meet her criteria, she can use other methods.

Rebecca need not be limited to software that focuses on the instruction and practice of skills. If she wishes to provide opportunities to integrate the use of various subskills, she may follow up instruction and practice with programs that focus on more integrative responses to text. Interestingly, these programs may be similar to those selected by teachers with a more holistic view of reading, although key differences may be found in how and why they are used.

In addition to making careful software selections, there are other teaching decisions facing Rebecca in her quest to use computers productively. For example, should students be encouraged to work in groups at computer stations? If the development of automaticity in decoding skills through computer-based practice is an objective, individuals must have time to use the computer privately. When comprehension skill development is the goal, she may decide that it is more productive for her students to complete an activity in small groups, capitalizing on the interaction of their thinking in joint problem solving and diminishing the impact of complex exercises or tutorials on less-able readers. Thus, there are practical considerations that interact with Rebecca's beliefs about how reading should be taught.

A Whole-Language Perspective

When one considers approaches to teaching the language arts, holistic and subskill orientations have frequently been viewed as opposite ends of a continuum. Although they represent two different beliefs about language processing and learning to read and write, Samuels (1980) contended that some common ground is shared. In addition, those who subscribe to either point of view have a variety of instructional options. Just as there are many variations of the subskill approach (cf. Distar's emphasis on a linear hierarchy of skills with Otto's notion of focused reading instruction), whole-language approaches also take different forms. Newman (1986), for example, has argued that whole language is not a method but rather a way of thinking about language and language learning. Instead of a set curriculum of objectives or prescribed teaching methods, she has argued that general principles of instruction guide the teacher who accepts a whole-language orientation.

Like teachers employing a subskill orientation, those who advocate a whole-language position also must answer difficult questions. Although some are theory related, others focus more on the realities of how schooling is conducted. How do process strategies differ from skills? How does one evaluate the reading and writing processes? What evidence is there that writing really fosters reading, and vice versa? Does the whole-language advocate believe in a

curriculum? If so, what would compose that curriculum? What is the alternative to writing behavioral objectives? These are just a few of the general questions one can pose.

Narrowly constrained computer programs that focus on skills in isolation are unacceptable to teachers who believe in a whole-language approach because such teachers see language systems as interactive and supportive. For example, Langer (1982), operating from a whole-language or total communication orientation, criticized early software development and use in the language arts and contended that most programs violated her beliefs about how language processes operate and how children learn. Edelsky (1984) pointed out that nearly all subskill-oriented programs are based on principles contradicted by current knowledge on language processing and language learning. Rubin and Bruce (1984) found that only about 10% of language arts software dealt with language at the sentence or text level, a statistic indicating a problem for teachers seeking software containing discourse.

Harste, Woodward, and Burke (1984) recently presented a rationale for a whole-language perspective and offered some instructional ramifications of this orientation. They argued that the heart of all language activities—reading, speaking, writing, listening—is meaning, and meaning is contextual. Thus, a whole-language classroom must provide opportunities for all language systems to be used interactively. Language learning is not a matter of concrete skill development in their view; instead, it is seen as the integration of complex language processes. And learning does not occur as a series of specific steps but rather as a series of successive approximations. The classroom conditions required to implement this perspective include ample opportunities for students to engage in functional and natural uses of written text. Reading and writing are thought of as tools instead of subjects to be studied.

Unlike Lesgold, who presented suggestions for translating his theoretical notions into practice, Harste, Woodward, and Burke (1984) did not address the issue of how computers fit into their perspective. However, other writers, working from a similar perspective, have described how computers may contribute in fostering the language arts (Collins, 1983; Liebling, 1984; Rubin & Bruce, 1984). Word processing , writing coaches, message systems, simulations, data bases, and interactive texts are applications consistent with a whole-language orientation. However, computer software based on whole-language principles may also present hidden problems and paradoxes. Some of these issues are highlighted below.

Gayle's Quandary

Consider another teacher, Gayle, whose language arts instruction is based on a whole-language perspective. Gayle teaches in a self-contained fourth-grade classroom. Like Rebecca, she wishes to use computers in a manner consistent with her espoused theory of language learning, and she wants to integrate computers into her teaching. On the one hand, her decisions are easier than Rebecca's because many of the available subskill-oriented drill and practice programs can be rejected easily. These programs are obviously inconsistent with her notions concerning literacy development and learning. Unfortunately, eliminating this pool of software restricts considerably the software she can select. Further, by auto-

matically rejecting all subskill-oriented programs, Gayle may miss creative opportunities to adapt software to her purposes.

Some of the programs Gayle examines seem to fit her perspective. For example, a recent computer program purporting to teach reading through children's writing appears to take advantage of the connection between reading and writing (Tierney & Leys, 1984). However, close examination of the program reveals one of the major problems facing the teacher who sees language holistically: partial theoretical congruency. While the program fosters writing by encouraging the use of invented spelling and permitting students choice in selecting topics, it also includes numerous phonic drills where phoneme/grapheme relationships are presented in isolation. Gayle's quandary is whether or not to use a program only partially congruent with her beliefs about teaching the language arts.

Another promising writing program allows children to create pictures prior to composing a story. She is aware of the research that suggests pictures aid in the composing process (Graves, 1981). Unfortunately, close examination of the program discloses two important flaws that conflict with Gayle's notions about fostering the writing process. First, pictures can be created only from a finite set of previously stored figures (trees, animals, people, vehicles, houses, etc.), and there is thus less of a feeling of ownership of the text. A second problem is the program's inability to print out the story and pictures. Stories can be stored but not printed, which denies authors the opportunity to publish their stories. Again, an important aspect of the composing process, one normally present in Gayle's classroom, is missing.

While the programs described in the previous paragraphs do not satisfy Gayle, some computer-assisted writing software does match her needs. This software allows students to select most of their own topics, progress through various stages of the writing process, use invented spelling in initial drafts, and publish their final drafts. For example, one program guides students through a series of questions designed to stimulate prewriting, while another assists writers in revision. Here, Gayle runs into a problem similar to the one encountered by Rebecca—directions and explanations often are too difficult for her students to read independently. Some of her less-able readers may not be able to profit from the questions and tutorials found in current computer-guided writing programs. Many of the available programs seem to be designed for high school and university students. Despite this limitation she does find some programs designed specifically for elementary-level children (Tchudi, 1983).

Shell programs—those facilitating the entry of original work into the computer—offer promise to Gayle because they allow children the possibility of creation as well as ownership; moreover, some instructional packages permit students to use the concept or strategy being taught in a personal, meaningful way. Gayle believes that the consummate shell program is one that permits word processing (Daiute, 1983; Schwartz, 1985). And she is aware of new programs that combine prewriting outlines with word processing. Gayle shares the enthusiasm of many of her peers concerning the potential of word processing applications in reading and writing instruction (Bradley, 1982; Miller, 1985). The features available in word-processing packages

should allow her to continue the positive aspects of her normal writing approach while taking advantage of the special features offered by the computer. However, Gayle discovers that she must choose carefully because many word-processing programs designed for elementary students restrict the revision and editing options available (Newman, 1984).

Gayle is also interested in interactive texts, a label that has been used to describe two different applications of the computer to language arts. In one instance, interactive text is a narrative that enables the student to manipulate the events of a story. This type of interactive text may develop awareness of the choices authors make in writing stories and may also foster the development of story schema. Moreover, this kind of interactive text can provide an opportunity for multiple readings with a meaning emphasis, a technique consistent with a whole-language perspective. Notwithstanding the apparent promise of interactive narratives, Gayle discovers she agrees with Dillon's (1985) criticism of computer software that presents stories: Many stories in existing programs have little literary merit.

The second instance of interactive text also intrigues Gayle because it is congruent with her beliefs that reading and writing should be an integral part of content area instruction (Moffett & Wagner, 1976). One program presents expository text accompanied by an automated table of contents, presentation of key words in context, electronic index, and concept mastery test. If certain concepts are not understood, the reader may request that they be presented in alternative ways, which may include a graphic representation of the content (see Reinking, chapter 1 of this volume). Although she saw this type of program demonstrated by a researcher at a conference, Gayle has discovered that this type of software is not yet widely available commercially.

The use of simulation programs makes sense to Gayle because they take advantage of unique computer capabilities and blend naturally with her ideas about using content as a normal part of language arts instruction. A simulation of Halley's Comet fits well into her current science teaching, while another simulation requiring children to run a store is useful for teaching mathematics, and Gayle finds in this instance that the computer is a reliable tool for integrating language arts into the teaching of content. Some simulations, however, unnecessarily limit her students' creativity by forcing them to answer low-level questions. Gayle also discovers that some simulations have game formats that are fun for students but can distract them from the purposes of the simulation. For example, one program takes students on a simulated trip across America in pioneer times, and this matches a topic discussed in her social studies class; unfortunately, some of her students are distracted by a "hunt" option in the program, spending most of their time shooting at a deer running across the screen.

Gayle's Solution

Despite the limited amount of software congruent with her perspective, Gayle does find ways for the computer to contribute to language instruction. She decides that a data base is useful because it can be manipulated to serve the subject under study. It fosters the learning of classification and retrieval strategies, and it allows students to enter personal information

(Bell, 1985). For example, in a mathematics activity, children might use data about their tastes in clothes, food, music, and so forth to learn about graphing, ratios, and percentages. At the same time they can communicate their results in writing.

She also decides to use several other shell programs that prove useful. Word processing becomes an integral tool in her composition program. She finds that children have a propensity to write longer stories using word processors, and these become useful vehicles for teaching revision and editing skills (Daiute, 1983). A shell program that allows her students to create a newspaper provides the impetus for her students to begin publishing their own newspaper. In each instance the computer program complements and facilitates activities normally seen in Gayle's classroom.

Other programs present opportunities for computer use as well. Although interactive stories may not be great literature, the decisions required to construct a story allow her students to engage in repeated readings for meaning. Other programs match the reading strategies she is attempting to foster by encouraging prediction and confirmation. Notwithstanding their weaknesses, some simulations add variety and active involvement to her teaching units. Finally, computer-guided writing programs, despite some drawbacks, provide many of the supports normally given students in a conference with a teacher.

Conclusions

We have illustrated some of the issues facing teachers in their quest to move technology into the classroom. The paradoxes and problems are sometimes frustrating, but many successful teachers seem to be able to navigate their way through these difficulties. Given an awareness of the issues, teachers can make informed choices concerning technology and how it can be applied to language arts instruction. Teachers will benefit from an examination of their beliefs about language arts instruction. As Schön (1983) contended, they need to become reflective practitioners. Clearly, this type of thinking will lead to different perspectives as the two examples in this chapter have shown, and thus the use of technology will vary, but, as Olson (1984) argued, whether the computer becomes a Trojan horse or a teacher's pet is dependent not on technology alone but on teachers' perceptions of technology as an integral component of teaching and learning. In one of the early books on the use of computer technology in education, Ellis (1974) commented, "thinking about the computer's role in education does not mean thinking about computers, it means thinking about education."

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Talk: A Medium for Learning and Change:
An Inquiry Orientation

by Gordon Wells

The title of our project asserts that talk is worthwhile: it provides a medium through which we — students, teachers, administrators and resource personnel — can learn and change. But <u>what is the relationship between learning and changing and how does talk enter into these processes?</u>

We know from our own experience that, when we have a problem to solve or a difficult decision to make, it helps to work through the problem or predicament with somebody else, weighing the evidence, considering the alternatives and predicting their likely consequences. In order to act, we need to be clear about our beliefs and, in acting, we test our beliefs and gather new evidence that leads us to maintain or change them. Talking, reading and writing are the means we use: to clarify our own thinking, to learn with and from others and to plan, control and evaluate change. Without language, we should be at the mercy of the external world, with no means of standing back to deliberate about and rehearse events in the mind before being caught up in the physical reality. Without language, we should have no way of thinking with others. Without language we could not learn.

So. Talk is important for learning and change. But that still leaves many questions unanswered — particularly questions about the sort of changes that need to be made in the classroom to ensure that talk really does function well as a medium for learning. Here are some of the questions to which I want answers. I expect you do too. And I'm sure you have others.

- Do some forms of talk promote learning more than others?

- What sorts of activities and participant formats promote the 'exploratory talk' that has been claimed to facilitate learning?

- Inevitably, some students in a group will talk more than others. So how can I be sure that all students are really learning?

- How does students' talk relate to what they read and write and to their other classroom experiences?

Curriculum Development and Educational Change

To give a more central role to talk as a medium for learning will require some changes in most classrooms. But first a decision has to move in that direction, and then a whole number of questions, such as those listed above, need to be answered.

The traditional way of handling curriculum development and change has been for the curriculum planners to put questions like these to the 'experts', then, when they have received the answers, to work out a plan to bring about the required changes, which they give to the teachers to implement. Some time later they do some form of evaluation to see whether the results of the change have lived up to their expectations. Almost invariably, they find that they have not.

The reason for the lack of success of this approach, I believe, is that the theory on which it is based is fundamentally misguided. For real change that leads to improvement in students' learning to occur, the top-down, transmission model of curriculum development needs to be replaced by one in which informed teachers become equal partners in the decision-making processes. Here are some of the arguments to support this claim:

- Every class is different from every other. Individual students each have their own interests and their strengths and limitations. They also have different contributions to make from their own past experiences, both personal and cultural. Equally, every teacher has a particular style of teaching that is based on beliefs, values and past experience. Together, teacher and students make up a classroom community that is unique. No answers to the sort of questions listed above that are given by people in distant places are going to provide solutions for the particular problems that arise in particular classrooms. Conclusion: Teachers need to become their own experts.

- In order to act effectively, we need to be in control. That is to say, we need to set our own goals, plan how to achieve them and make changes when we perceive a mismatch between intention and outcome. We need to understand what we are doing, imagine what we might do instead, and have a way of evaluating the alternatives. These principles apply to teaching as much as to any other complex activity. Conclusion: Teachers need to become their own experts.

- We learn most effectively not by being told what to think and what to do, but by being agents in our own learning: identifying problems of importance to us and developing the understanding to solve them — by seeking out information, testing hypotheses, reflecting on the outcomes in the light of our beliefs, and trying to explain what we have discovered to ourselves and to others. These principles apply to teachers as much as to any other learners. By treating the relationship between teacher, students and curriculum as problematic, that is to say as a matter that they can actively address in their own classrooms and through discussion with others who do the same, teachers can take responsibility for their own learning and not accept dependency on others. Conclusion: Teachers need to become their own experts.

- Learning is as much a social as an individual activity. By taking part in purposeful, collaborative enterprises, we learn from the example of those more expert than ourselves as well as from their explanations. From this point of view, learning can be thought of as an apprenticeship. In classrooms, children learn from the examples provided by their teachers. They thus need teachers who are themselves active enquirers in their own learning so that, as they work collaboratively with their teachers, they can see in action the skills and strategies that they are expected to acquire. Conclusion: Teachers need to become their own experts.

The School as a Center of Inquiry

A few months ago, I came across a book written more than 20 years ago by the Dean of Columbia Teachers' College. In it I found, stated more cogently and in much more detail, the arguments that I have just sketched. Schools, the author argued, should be places in which inquiry is the fundamental stance, not just int science lessons, but all the time and at all levels. Administrators, teachers and students should all be engaged in actively constructing their own knowledge through systematic inquiry. Here are some quotations from that book:

> By a school organized as a center of inquiry, I imply an institution characterized by a pervasive search for meaning and rationality in its work. Fundamentally, such a school requires that teachers be freed to inquire into the nature of what and how they are teaching. Discovering new knowledge about the instructional process is the distinctive contribution which the schools might be expected to provide. As every teacher knows, however, pedagogical strategies cannot be meaningfully separated from content, and there must also be continuing opportunity for the teacher to inquire into the substance of what is being taught. Finally, no school can be reflective about its work or serious in its commitment to learning if students are not similarly encouraged to seek rational purpose in their own studies. (pp. 3-4)

> The principal and the teachers working as colleagues in a particular school must be freed for an independent search for viable patterns. The basic problem is not the control of school faculties, but the deliberate creation of new intellectual outlets for teachers, the development of new work patterns for sustaining imaginative and systematic reflection. (p. 41)

> If there is to be fruitful inquiry in the schools, however, administrators can perform no higher function than to facilitate it. To do so will require the deliberate and self-conscious reduction of executive authority and the nurturing of free scholar-teachers. *But* it may very well be that such a voluntary dispersing of power remains the only viable means for administrators to retain any actual leadership in educational affairs. (p. 68)

The conception of the scholar-teacher entails a connection with a university faculty, an organic link with the academic world, and the stimulation which participation in advanced graduate courses, in research seminars, and in jointly conceived investigations provides. Some public schools, organized as centers of inquiry, can become active units in the production of knowledge, sharing the burden in the professional field of education with the universities of our society.

And finally, as I have earlier asserted, how can children fully know the dynamism of learning if the adults around them stand still? (p. 75)

Robert J. Schaefer, *The School as a Center of Inquiry.* New York: Harper and Row, 1967.

Others have put forward similar arguments about the value of teachers engaging in classroom-based inquiry. Stephen Rowland writes as follows:

The speed with which we have to make decisions on our feet often allows little time for cool reflection. For this reason, the interpretations we make in the classroom are likely to be based on rules of thumb and everyday assumptions about the children and the subject matter which we use uncritically. A more careful investigation of what children's activity really means requires not only time but a certain 'intellectual space': an opportunity to reflect, preferably with others, and to develop and share insights into the children's concerns, skills and understandings. Certainly, we cannot reflect with this degree of intensity upon all the children's work, nor even upon a major proportion of it. Nevertheless, the in-depth study of selected samples of activity from our classrooms can lead us to challenge, modify and at times radically alter those assumptions from which we work when we interact with children in the classroom. It can help us build an understanding of the learning process and of the concerns of children which are expressed and developed through that process. We must develop such understanding if we are to realize our role as educators rather than merely as purveyors of knowledge. (p. 29)

Stephen Rowland, 'Classroom Enquiry: an Approach to Understanding Children.' In D, Hustler, T. Cassidy and T. Cuff (eds) *Action Research in Classrooms and Schools.* London: Allen & Unwin, 1986.

In a similar spirit, Judith Newman urges teachers to become agents in their own professional development. In an article entitled 'Learning to Teach by Uncovering our Assumptions' (*Language Arts, 64 (7)*, Nov. 1987), she explains why worthwhile change depends upon becoming an active inquirer in one's own classroom:

Changing what we do in the classroom in any meaningful way involves changing attitudes and beliefs, but before we can change our attitudes and beliefs we have

to know what they are. The only route I know to uncovering our instructional assumptions is to delve beneath the surface of what we are currently doing. Critical incidents offer us one powerful way of doing that. (p.736-7)

Collaborative Inquiry

For the last three years, in a project supported by the Ministry of Education and the Toronto Board of Education, my colleagues and I have been learning about collaborative inquiry in practice, as we have worked with a number of individual teachers on topics arising out of their own classrooms. From this experience, I have learned that collaborative inquiry can take many forms and that it needs time to develop. But I have also had my convictions confirmed. Without exception, those teachers who undertook a systematic inquiry over a significant period of time, found that they had come to think about their role in a new light. As one put it: "In conclusion, I can say that the collaborative research that I have engaged in has changed my view of teaching and learning quite dramatically. My focus has clearly become more learner- centred." Another wrote: "Although my inquiry is far from complete, my professional behaviour in the classroom has changed as the children and I are drawn more closely together into a community of learners working to explore, reflect, and in the light of new information, to revise old assumptions and to expand our understanding of the processes of thinking and learning." (from 'Improving opportunities for Literacy Learning through Teacher-Researcher Collaboration', a symposium presented at the I.R.A. Convention, Toronto, May 1988)

I was delighted when I was invited to become involved in this project on talk, as I saw that it would give me an opportunity to share what I had discovered with other teachers who might also be willing to 'have a go'. What makes it all the more exciting is that this project involves whole schools and not just individual teachers. In funding this project, the Ontario Ministry of Education is providing the opportunity and the encouragement for four schools to become centres of inquiry. It is now up to us.

Talk, and how to enable it to serve most effectively as a medium for learning, is the topic for our inquiry. Purposeful, collaborative talk provides one of the means for organizing it, for reflecting on what we discover and for deciding what we should do as a result. Talk will also enable us to prepare to share our inquiries with others, in oral and written presentations, and to persuade them to become inquirers, too.

"Imaginary Gardens with Real Toads": Reading and Drama in Education

by David Booth

Reading and drama are closely linked in the learning process. They interact with each other to develop the same personal resources in the child, building links between print and experience, dream and reality, and self and other (McInnes, 1983). Teaching must be concerned with promoting thinking/feeling strengths in students whether they are interacting with print or people. The pressure and the authenticity of the dramatic moment can help children create new knowledge and make different and necessary connections.

Education is the process of helping humans find essential meanings in life, and this search for meaning links reading and drama. These meanings accrue by living through actual and symbolic experiences, both in life and in role. Finding meaning and developing thought/feeling/language potential are bound up with the child's attempts to make sense of life's situations by being involved in them and by drawing inferences from them (Donaldson, 1978).

Reading, Drama, and Learning

As an act of learning, reading is basically a private experience and drama generally a shared one. When children read, they understand what the words say to them, translate the experience being read about into their own context, and conjure up feelings, attitudes, and ideas concerning everything from the author's values to their own life situations. They react and respond personally, free from outside intervention, to enter as deeply as they decide into this new world of meaning.

The interactive, participating model of the drama experience helps children grow in a different way, moving them forward toward new, collective understanding. This does not mean, however, that drama is just an activity to be used after reading a story, as a check of comprehension, or as a means of motivating children to read a particular selection. It may assist in these goals, but it is, on its own, a powerful medium for helping children make learning happen.

Children who have rich experience in storying bring a sense of expectation to print. Because they know that meanings are not fixed but rather reflective of the reader's background and the familiarity with what is being read, they can explore print, take charge of finding meaning, and rework hidden concepts until understanding happens. The ability to handle reading in this way is the hallmark of a good reader. Since drama encourages children not to be satisfied with immediate, simplistic solutions but to keep exploring, peeling away the layer that cloud the meaning, it can help develop the "what if" element that must be brought to print if true reading is to occur.

Children's ability to make sense of the messages that flood them is often beyond their ability or willingness to communicate their understanding of those messages. A teacher may know that a child gets something from a story while not knowing exactly *what* the child perceives. Children learn to read through personal relationships and the process of reading becomes an extension of these relationships. They relate to stories in terms of their own identity, just as who they are determines their response to their family, friends, and environment.

By responding to other people's cues and by having them respond to theirs, children begin to establish their own identity, always adapting, retelling, and reshaping possibilities. As they explore through conversation and role play, they learn to risk and to express—necessary experiences which can lead to literacy. They learn about life through their own storying and through the stories of others, creating their own unique narrative.

Through the use of externalized representations, such as drama, children's perceptions are altered and expanded. As they grow in their skills, they expand their ideas and their ability to express those ideas. The better their ability to manipulate the art form, the more effective their own learning and communication.

Children are active, self-directed learners outside the classroom. We must foster these same qualities in school situations, helping children to develop techniques and skills for exploring a wider range of interests.

Story and Narrative

Some teachers think drama, by its very nature, is determined or predetermined by plot, that it is action bound, driven by the sequential actions of the plot rather than the inner dynamics of the drama situation. Bolton (1984) presents another view:

> Shakespeare understood that plots are not in themselves what drama is about; they are merely the retrospective link between situations. It is in retrospect that a play tells a story. As it unfolds, the audience is identifying with the occurring situation. (p. 38)

But neither is story about plot. White (1981) maintains that attempting to define narrative takes us to the very nature of culture and humanity. He quotes Roland Barthes: "Narrative is simply there, like life itself, international, transhistorical, transcultural... (It) is a human universal on the basis of which transcultural messages about the nature of a shared reality can be transmitted. Here no one speaks... The events seem to tell themselves" (p. 3).

Story is a basic way of organizing human experiences, a framework for learning. "Story is a primary act of mind," writes Hardy (1977) in *The Cool Web*. "Narrative, like lyric or dance, is not to be regarded as an aesthetic invention used by artists to control, manipulate, and order experiences but as this primary act of mind transferred to art from life" (p. 21). What concerns Hardy are the qualities fictional narrative shares with the inner and outer storytelling that play a major role in a child's sleeping and waking life. Storying is our

constant attempt at exchanging identities and remaking the past, a mode of looking back to go forward:

> For we dream in narrative,
> Day dream in narrative,
> Remember, anticipate, hope, despair,
> Believe, doubt, plan, revise, criticize,
> Construct, gossip, learn, hate and love
> By narrative. In order to really live,
> We make up stories about ourselves
> And others, about the personal, as well as
> The social, past and future. (p. 22)

While adults differentiate their thoughts with specialized kinds of discourse (e.g., narrative, generalization, and theory), children must make narrative do for all (Moffett & Wagner, 1984). Children speak almost entirely through stories, real or invented, and they comprehend what others say through story. They speak and read about characters, events, and settings, all of which are filled with symbolic meanings.

The drama/narrative continuum builds meanings for all of us. The link between "my" story and "his" story is described by Chukovsky (1963):

> As if there were a basic difference between the fairy tale that a child made up himself and one that was created for him by imaginative folk or by a good writer! ... It makes no difference whether or not the child is offered fairy tales for, if he is not, he becomes his own Andersen, Grimm, Ershov. Moreover, all his playing is a dramatization of a fairy tale which he creates on the spot, animating, according to his fancy, all objects—converting any stool into a train, into a house, into an airplane, or into a camel. (p. 118)

Search for Meaning

Reading fiction, like watching television, is not something one does by oneself, but is a transaction involving the storyteller and the listener (Inglis, 1976). Reading comprehension is the ability to search for meanings and to think about what one has read. Children's understanding will be determined by their own personal knowledge, gleaned from their actual and vicarious experiences, and from the particular social and cultural contexts that surround their lives. Teachers can enhance comprehension by using techniques calling for maximum participation of all children (e.g., drama), by inviting a wide variety of responses, and by giving children various art forms with which to respond. "We must stretch his powers of making sense of what he reads, that relates to the world he really lives in, has talked about, and continues to talk about" (Britton, 1970, p. 164).

Through drama, teachers help children acquire the means to more fully understand what they have experienced. Students need to interact with both the author's thoughts and their

own thoughts in order to bring about true learning. The teacher must constantly help the students go back and forth between the stories and the students' improvised responses (Fines & Verrier, 1974). Children learn that to translate print into meaning, they must view print as a code to be cracked, and that to make sense of the story requires the application of their own experiences (Wagner, 1976). Teachers can draw on the vast resources of the story to stimulate and enrich students' search for meaning in drama. Groups can test and clarify the implications of the text collectively, so that each person can see the differences among various perceptions and interpretations and then make decisions about his/her own response (Moffett & Wagner, 1984).

Dialogue for meaning is the heart of drama. As individuals role play they enter into a dialogue, affecting and modifying the actions and behaviors of others, and exploring the symbols they are using so that they may understand the meaning with which they are concerned. Each participant evokes and responds, creating and sharing experiences in the expressive act of drama. In communicating perceptions and attitudes through drama, children add to the shared experience of those with whom they dialogue (McGregor, Tate, & Robinson, 1977).

When reading a story, the dynamic of the narrative is what drives the child on. Often, in school, we stress the ability to analyze after reading a story, rather than the skill of making meaning happen while in the interactive mode of reading. Teachers of reading will have to develop structures to help children work inside the print mode as they experience the words; similarly, teachers working with drama will have to find ways of promoting learning as the dream is happening, not just during reflection time after the experiencing.

Drama and Story

In both drama and narrative the context is fictional, but the responses are real. The garden, as described by the poet Marianne Moore (1935, p. 37), may be filled with imaginary dangers and delights never witnessed on earth by anyone, but what the visitor to that garden feels must be real, as real as the warts on the toads. The emotion may be a "modified version of the same emotion felt in an actual event, but it can be equally or even more intense" (Bolton, 1984, p. 139). Although the child is in a make-believe situation in story and drama, the real world continues to exist, and the learning that occurs for that child lies in this negotiation of meanings—symbolic and actual—taking place in both modes.

Drama helps children journey inside the story garden, so that they can reconstruct the symbols, images, and narrative sequence "in action," thus re-examining the story's ideas, experimenting with them, learning to "play" with the narrative, and in reflection, coming to an understanding of both the story's possibilities and the art form used to create it (Neelands, 1984). In drama, the mutual, symbolic collaboration of ideas, undetermined by plot, allows children to pause in a fictional present, linger on an image, or move forward, backward, and sideways, in an attempt to make meaning happen. Time can be altered and ideas juxtaposed. If a narrative is being used as the source of a drama, the children can identify with and clarify what is happening both in the book, in the drama, and in their own lives. Learning is integrated as they engage with the symbolic art forms of both modes.

If narrative and drama give form to thought and feeling, can we make use of one to build the other? Do I risk diminishing one if I include the other at the same time in my teaching? Can we use drama to clarify and strengthen the reading of story, and can we use story to stimulate or enlighten the drama work?

Drama draws a large part of its of its content from story. Participating in drama situations from stories is an effective and appropriate means of providing the active involvement and experience that being a mature reader seems to require. In order to develop thinking/language/feeling abilities in children, we must place learning activities in a meaningful, embedded context. Drama in education is a whole representation of thought, providing whole meanings for each student (Courtney, 1980). An individual develops a feeling for story as much through kinetic activity and association as through more intellectualized approaches, and drama seems to be the most promising vehicle at hand to allow such direct enjoyment (Duke, 1975). Drama helps children make their thinking visible (Wagner, 1983).

By choosing situations from stories, teachers can give students the power of literature, with all its encompassing levels of meanings, as a beginning point for dramatic activity. The vast resources of the story—its situations, characters, relationships, atmosphere, and concepts—can be utilized to stimulate and enrich students' exploration in drama. "In this interchange between drama and story, the child is brought into direct contact with a wide range of shared cultural symbols" (McGregor, Tate, & Robinson, 1977, p. 154).

Those of us who were avid readers in childhood entered readily into that private world created between ourselves and the text. OUr response was effortless and we had little need to analyze it. As teachers, our attempts to develop in our students that special relationship with the text are often frustrating. We wish both to engender response where it is lacking and to deepen response where it exists. At the same time, we hope that students will retain a comprehension of the characters, events, and issues we have covered. Yet we are constantly faced with the fact that such retention is impossible without a genuine personal response from the reader. We search for teaching methods which externalize the interior world of the readers and allow us to bring the text into a closer relationship with them.

How do we engage children in the life blood of the story? When children read or listen to a story, they create personal images in their minds. In drama, they help build a group image. How will they go about these tasks? Will they improvise within the story, stand on the story's shoulders, or build on the story by designing new contexts, finding analogies and patterns, or placing it alongside others (Rosen, 1984)?

Story Drama

Since story dramatization traditionally implies a sequential approach, I suggest the term *story drama* to be used in its place. Story drama occurs when the teacher uses the issues, themes, characters, mood, conflict, or spirit of the story as a beginning for dramatic exploration. The students draw from within themselves ideas, feelings, and conclusions based on the story. Drama involves people in some kind of struggle or problem; the action in story

drama develops as the participants solve or work through the dilemma symbolized in the story.

Replaying the story through a literal enactment of the plot has occasional value, as for example in clarifying sequence, but the teacher is not limited to story plot (Ward, 1957). What is important is not the process of enactment but the exploration of the meanings of the story—the themes, concepts, and issues. Stories may be the inspiration for the planning, says Heathcote (cited in Wagner, 1976), but "it is not stories the students re-enact; they simply live through some events as best they may, using what they already understand to 'inform' the situation, and give them a hold on it. And this in turn, leads them to need further information, gleaned through the 'living-through' "(p. 65).

Story drama frees the teacher and students from the pressure of acting out the whole story or remembering a script. The teacher is primarily a questioner who awakens the students to what they wonder about the story. The questions are designed to focus their knowledge of the story on new areas (Davies, 1983). Thus drama may occupy only a few minutes of the teaching schedule and can complement other teaching methods to emphasize particular aspects of the text.

Because students are allowed to bring what they know to the drama, it engages their imaginations and they inevitably move closer to the text. In this sense, the drama may even explore the text at one-remove, or, as Dorothy Heathcote often does, through an analogy which unlocks internal comprehension. Because of the brain's ability to use metaphor, the pattern of one set of images can be used to organize quite a different set. The images from one story can be used as images for related and yet different meaning. Story drama opens the door to an endless number of curriculum linkages.

Dramatic Moments: An Elaboration

Dramatic moments are often built around issues rather than scenes from a story, as my work with a group of 10-year-olds illustrates. We were working with *The Dancing Tigers* (Hoban, 1982) a complex picture book that uses the folktale idiom to deal with the problem of modern society's encroachment on nature. In the story, the Rajah disturbs jungle life by bringing taped music along on a tiger safari, and in revenge, the tigers dance the Rajah to death. How this occurs is unclear in the book. When I asked the children how he had died, they were unable to tell me. They had not been able to make sense of this crucial element of the story.

Using drama as a tool for unlocking meaning, I went into role as the Rajah's son who had returned from America to discover the reason for his father's death. The children in role as the trackers and servants gave me various explanations about his death, conjectured from their own knowledge, but unrelated to the story. Eventually, two students volunteered the information that the Rajah had been danced to death. I, in role, angrily rejected their responses, claiming that I no longer accepted such superstitious beliefs since I had been educated in America. It was now up to the students to prove the truth of the story to me,

since I had ordered them all locked up until they disclosed the real reasons for his death. The son then left the room, and I, as teacher, worked with the students in groups as they set about planning to help the son understand what had happened on that safari.

When we returned to role, the children demanded the opportunity to prove that the father had indeed died from the dancing tigers. They asked the son to accompany them on a similar safari, with music, and when this had been agreed to and the ensuing drama had begun, everyone was sitting with me in the circle. Then two boys, as tigers, began the Dance of the Silence that is Partner to the Violence. As we watched, I was suddenly taken by both arms and told politely to leave the tigers or I would meet my father's fate. The children had understood the concept of the tale; by teaching me, they had unraveled the threads of information and come to grips with an experience outside their own frame of reference. They had made sense of the story by reliving it through drama. Thus, an elaboration of the story led to a more thorough examination of one of the story events. As the children took on the roles of the servants, they brought to the drama not only all they knew about the story situation but also all they knew about being questioned by authority, and all they knew about innocence and truth.

Designing an Elaboration

In designing an elaboration, the teacher must bring pressure on a story event to reveal its deeper meaning. The pressure begins at a level which allows children to apply their own knowledge. They need to interact with the story in order to bring about meaning. The roles and the situation must be embedded into the lives of the children. "The teacher must search for a possible starting point that is relevant to the children's experience, relevant to the spirit of the story, a vehicle for confrontation through language" (Rosen & Rosen, 1973, p. 212). The teacher works through the elaboration in any of the following ways:

1. in preparatory discussions by helping students analyze the story or challenging their thinking about it;

2. in a drama setting of "people in a place with a problem to solve" (e.g., servants meeting in a hall to answer the questions of the Rajah's son);

3. by providing a structure for response within the drama setting such as dividing student into pairs or subgroups with tasks (writing a petition to the Rajah's son or inventing a good explanation to satisfy him);

4. by taking a pivotal role within the drama itself (e.g., the Rajah's son);

5. by taking a neutral role which allows the teacher to question or elicit responses within the drama (e.g., the prince's scribe who comes to record the answers to his questions); or

6. by helping the children take charge of the drama (e.g., they must help keep the tigers safe from outside elements).

As in any other teaching task, much of the planning can be done in advance. Children will accept the teacher in a number of roles even within the same lesson. The role may be used so sparingly that any teacher can feel comfortable with it. The power of the teacher in role is the magic of story drama because it enables the teacher to accompany the children into the metaphoric world of the story (Stabler, 1978). The intersection of their private worlds and imaginings with the world of the story produces the power for comprehension and response.

During the drama children share the inner world they enter into when reading the story, and this externalized fantasy is elaborated and enriched by a group experience. A resonant relationship is set up between the individual responses of the students and text; i.e., the teacher and students interact with the text in ever-widening ways. The story becomes significant and remains with the child until needed or wanted.

Summary

In Walsh's (1978) novel, *A Chance Child*, Creep, an abused child, takes a river journey backward into 19th century England, where children are made to work in the mines, and where they are treated as harshly as he is in his present world. On seeing a pathetic, ill-used young girl leading a huge white horse, Creep exclaims:

> "Them's horses. And they're bigger'n what I'd of thought." He closed his eyes to remember the rag book, with colored pictures half worn off the cloth, which had supplied him with this information from the depths of memory. "But they don't bite," he told himself sagely. (p. 26)

Can we give children more than faded, rag-book memories with which to cope with the ordinary and the fabulous experiences of life? Can we somehow find stories for children to read and listen to that support, encourage, and facilitate making sense of so much that seems nonsensical, incongruous, or unfair? Can we find strategies, such as drama, that help children bring more meaning to the seemingly incomprehensible print they are forced to deal with daily in their school lives?

> I suppose the teacher is the journey-maker. But I think it's a journey of learning access to knowledge and responsibility for the access. It would be wonderful if today's teachers could distinguish between just giving stored knowledge to kids and helping them take on the responsibility of tapping that stored knowledge and discovering the ways to do it. (Heathcote, 1983, p. 699)

Helping real children to explore imaginary gardens in dreams, drama, and life must be the mandate of those of us involved in creating learning situations for children—private and shared journeys in imaginary gardens, with real toads.

Notes: The phrase "imaginary garden with real toads" is taken from the poem entitled "Poetry" in Moore, 1935, p. 37.

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Looking, Thinking and Learning: Visual Literacy for Children

by Judith Landau

The need for schools to work closely with community resources has never been more apparent than now, when declining enrollments and budgets have cut deeply into school services. Museums have become major contributors to school systems in support and enrichment of existing programs and as developers of new programs. This article documents an outreach program developed at the Hirshhorn Museum and Sculpture Garden at the request of a neighboring school system. The history of the program, objectives, format, content, and methods of instruction will be discussed to share these specifics with others.

History

In 1978, the Office of Instruction and Program Development of the Montgomery County Maryland Public Schools approached the Hirshhorn Museum with a request to develop out-reach materials as enrichment for intellectually gifted, upper elementary students. Several single-visit lessons were experimented with, but the County had something more substantial in mind — a kind of mini-course in modern art (appropriate to the Museum collection), that would stretch the students' critical thinking skills. I was assigned to the project, and, with the support of the Chief of Education and the Docent Coordinator, an eight-part museum outreach program was developed. Two separate field tests were conducted, a grant was received through a Smithsonian Institution Fund for Innovative Outreach, and the program was launched. It was taught for three years in approximately 80 public schools in the Washington, D.C. metropolitan area, including several Virginia and Maryland counties as well as the District of Columbia. The program received critical acclaim both in the evaluation conducted for the Smithsonian Institution and from participating school administrators, teachers, parents, and students.

Objectives of the Program

- To teach children to be visually literate, defined as seeing with a sensitive, knowledgeable and critical eye. This involves knowing and being able to use the elements of a visual vocabulary through the study of paintings and sculpture, first as slides, then by viewing real art objects in museums. Repeated visits to the art museum are an inherent part of this program. Students learn to be comfortable in the museum, to know it's a special place, and a good one at that!

- To present the materials using an inquiry method that challenges and strengthens students' cognitive processes, particularly higher level, critical thinking skills. Students look at works of art, gather information from them, think about and discuss the information (analysis), synthesize their findings, speculate about meanings, and begin to make critical judgments.

- To use art history and criticism to inform and refine the looking skills. While this is not an art history course, the program does encourage students to understand the relationship of art and artists to their time and place in history.

- To invite and encourage parents to attend class sessions and/or museum visits, hopefully stimulating an interest that families can share.

Preliminaries

Before the visual literacy program begins, several sessions are held with school personnel for planning and the securing of commitments. Meetings are held with the school principal, art specialists, and classroom teachers who will be involved, and with parents to acquaint them with the scope of the program. At these meetings, a lesson is briefly demonstrated. A half-day workshop for participating teachers and supervisors is conducted to introduce them with extension activities to be used with students. It is important to include the school personnel and parents in the planning and implementation aspects of the program to ensure their enthusiasm and support. The school must make commitments for scheduling time as well as provide transportation for the field trips to the museum.

The Format and Content

The program consists of eight, one-hour lessons, one per week. There are five in-class sessions and three museum visits. *Lesson I* takes place at the school and uses participatory activities to heighten students' awareness of their senses. They are encouraged to use a broad, descriptive vocabulary to depict their experiences during these activities. An essential outcome of the learning process fostered by this program is to have students express themselves verbally with as much variety as possible.

Lesson II, also conducted at the school, is a discussion of representational art. It begins with the basic elements all artists use, particularly when working on two-dimensional surfaces. These basic elements, (line, shape, light and shadow, color, texture) and principles (balance, rhythm, scale, overlapping, perspective, etc.) are introduced as the special vocabulary used when discussing works of art. Understanding of the terms is developed through questioning strategies and participatory activities. A series of slides, beginning with a simple line drawing and progressing to masterpieces in oil, is shown and discussed. All of the slide examples are representational and include portraits, still lifes, interiors, and landscapes. These images are used to reinforce the concepts introduced earlier by allowing students to see how artists have actually used these elements and principles in creating works of art. The slides are drawn primarily from collections in Washington, D.C. museums.

Lesson III is a field trip to the National Gallery of Art where examples of representational art are explored. An effort is always made to include works that have been seen in the slides. Students love to see the original after seeing reproductions, and confronting the "real thing" certainly draws attention to the importance of going to a museum.

Lesson IV takes place back at the school and concentrates on changes — changes that have occurred in the world over the past 100 years and changes that have occurred in the art of the past 100 years. Pairs of slides are compared and contrasted, marking the progression from representational to non-representational art. Among the examples are works by Claude, Monet, Cézanne, Eakins, Matisse, Harnett, Picasso, Pollock, Louis, Barye, Smith and Calder.

Lesson V takes place in the school and explores the enormous variety of artistic expression in contemporary art. Using examples of both paintings and sculpture, it surveys works by artists who express themselves realistically, (i.e. Estes, Close), works that are abstracted from reality, semi-abstract, (i.e. Dove, DeKooning), and works that are non-objective, totally abstract, (i.e. Hofmann, Noland). The lesson includes artists' uses of new methods and materials, (Arman, Snelson) as well as traditional materials used in new ways (Segal, Nevelson).

Lesson VI takes place at the Hirshhorn Museum where, again, the magic of the original can be experienced and discussed.

Lesson VII is a classroom session in which one hour is centered around in-depth discussions of two sets of paired slides. The paintings are described, analyzed, synthesized, interpreted, and evaluated. Imagine the insights gained by comparing and contrasting a city scene by Edward Hopper with one by Stuart Davis. Students are usually quite surprised when they realize how much time they have spent looking at only four works of art.

Lesson VIII is the culmination, the museum visit that ties it all up. By this time the students are at home in this special environment as well as enthusiastic and knowledgeable about what they're looking at and thinking about.

Methodology

Three classification systems come together in the methodology used to teach this program: 1) questioning (Aschner-Gallagher), 2) critical analysis of art (Feldman), and 3) levels of cognition, (Bloom's taxonomy). The dialogue between the teacher and students that integrates these three systems is conducted with flexibility and sensitivity. There is no special order to the questioning but objectives must be reached. The teacher asks, waits, listens, probes, and encourages — always finding that bit of "right" in every answer, allowing students to express themselves but demanding that answers refer to observed aspects of the works being discussed. Information gleaned ranges from the lowest level of critical analysis and cognition (i.e. description), to the highest (i.e. synthesis, interpretation, evaluation). By asking questions that involve all levels of critical thinking, every student has an opportunity to offer an answer and experience the satisfaction of success.

Conclusions

After having worked so closely with this program over a period of years in many different situations, there are some final observations to be shared. First, there was a genuine need and appreciation on the part of participating school systems for opportunities to enrich their programs with museum outreach. In some cases, this was the only extended art experience available to students. The schools made great efforts to manipulate their daily schedules in order to accommodate the classroom and museum sessions. Second, many parents participated along with their students and were enthusiastic about what they had learned. Often, students brought family members back to the museum for "special tours" that they conducted. Third, classroom teachers were delighted with the students' responses to the methodology used in teaching the program. A majority felt that all students, not only those identified as intellectually gifted, would benefit from these teaching strategies. The museum educators who conducted the program were enthusiastic about the method as well. You are constantly thinking on your feet, challenged to be creative with your next question in response to answers you receive from the students. Fourth, although no long term studies have been conducted, it appears obvious that this type of *repeated* exposure to new subject matter (visual literacy), and an unfamiliar place (a museum of modern art), encourages learning and growth.

The developmental approach to the sequence of classroom lessons combined with three museum visits reinforced the content with a variety of interesting learning experiences. Comments by teachers following the program indicate that they saw changes in the students' production of art works in their studio classes as well as in other areas of the daily curriculum. "The art work of the sixth graders shows use of the techniques discussed. It is much different from that of the fifth graders who didn't get the program" and "It changed the way kids looked at things — not just at art — things in books, things outside."[1] Finally, the program format allows for scheduling flexibility based on time constraints and student needs. The classroom segments can be divided differently, creating more sessions of shorter duration. There certainly are ample reasons for incorporating additional museum visits (there was never enough time to see it all), if money for field trips is available.

There are multiple possibilities for additional programs based on this outreach prototype. By way of example, a new program is currently being field tested. It uses this general format with a content that stresses the development of American art and is being taught, after in-service training, by art specialists and classroom teachers with the support of museum educators. In fact, this particular program, developed for Montgomery County, Maryland, was documented at a recent NAEA convention. The collaboration of schools and museums is an area rich in potential, challenging for school and museum educators, and exciting for all who participate.

Notes: [1] *Tymitz, B.L., Wolf, R.L., and Munley, M.E., (1980 June) What's the use of going to see art if you can't see it: A study of the Hirshhorn enrichment program for the gifted and talented. Washington, D.C.: Department of Museum Evaluation Studies, Smithsonian Institution.*

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